

ARTICLES

A SHORT HISTORY OF (MOSTLY) WESTERN ANIMAL LAW:

PART II

By
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This Article, presented in two parts, travels through animal law from ancient Babylonia to the present, analyzing examples of laws from the ancient, medieval, Renaissance and Enlightenment, recent modern, and modern historical periods. In performing this analysis, particular attention is focused on the primary motives and purposes behind these laws. What is discovered is that there has been a historical progression in the primary motives underlying animal laws in these different periods. In Part I of this Article, it was discovered that while economic and religious motives dominate the ancient and medieval periods, in the Renaissance and Enlightenment, we see social engineering—efforts to change human behavior—come to the fore. In this Part II of the Article, it is found that in the recent modern historical period we finally see protecting animals for their own sakes—animal protection—motivating animal law. In our present historical period, this Part II of the Article uncovers a movement towards what is defined as “scientific animal welfare”—the use of modern animal-welfare science as the inspiration for animal laws and regulations. Does this historical trend toward the use of modern science in making animal law portend a change that may transform

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our relationship with animals? Modern science tells us that many animals have substantial cognitive abilities and rich emotional lives, and this science would seem to lead us to question the use of animals in agriculture, experimentation, and entertainment altogether. It is ultimately concluded in this Part II of the Article, however, that only a very narrow science of animal welfare is actually being applied in modern animal-protection laws and regulations, one that proceeds from the premise that present uses of animals are legally, ethically, and morally appropriate. It is only in the future that the true implications of modern science may ever be translated into legal reality.

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I. INTRODUCTION

In Part I of this Article, the ancient, medieval, and Renaissance and Enlightenment historical periods of animal law were analyzed. In the Renaissance and Enlightenment, a change in the earlier economic and religious foundations for animal laws is observed—a shift to creating animal laws to effectuate human social change—i.e., social engineering. In this Part II, the analysis will move to the recent modern and modern periods where we will find further movement in the grounding of animal law.

II. THE RECENT MODERN PERIOD

A. *New Voices*

The nineteenth century saw many rapid changes, including the Industrial Revolution, railroads, and advances in science. Slavery was abolished as an institution in Western countries. There was, in addition, an evolution in animal law and its purported foundations. While in all prior periods of history there were those who called for vegetarianism or kind treatment of animals, their voices were muffled by the din of the status quo. But in the late eighteenth century, voices began calling for changes in the treatment of animals for the sakes of the animals themselves, and these voices ultimately led to new legislation relating to animal treatment in the nineteenth century.

Those who spoke up for animals in the eighteenth and nineteenth centuries were many and varied. As a result, not surprisingly, this was a period that saw the rise of compassion toward animals in popular culture.¹ Among the more notable scholars raising issues relating to the treatment of animals was Voltaire, who attacked Cartesian thinking about animals and decried vivisection.² Jean-Jacques Rousseau “attack[ed] meat-eating on the grounds that it is bad for the character, as well as unnatural.”³ Arthur Schopenhauer railed against cruelty to animals.⁴ Jeremy Bentham was, of course, a strong voice for change in human treatment of animals, and his legacy continues to the present in the work of utilitarian philosophers like Peter Singer.⁵ Much of the discussion of cruelty to animals was based on the idea that animals felt pain and were, thus, sentient.⁶ Some, such as Dr. Humphry Primatt in 1776, compared the tyranny and cruelty against slaves to cruelty to animals, and regretted that the law of England in his day did not adequately protect animals from cruelty.⁷ Sometimes cruelty was attacked under Kantian notions that cruelty to animals leads to cruelty to humans, as was argued by William Hogarth and others in England.⁸ English and American poets of the eighteenth and nineteenth centuries, not to be left out, also condemned cruelty to animals.⁹

There was much torture of agricultural and other animals in this period that these luminaries could attest to. For instance, agricultural animals were sometimes killed by being hung on hooks while they slowly bled to death, but there were no laws to prevent these activities.¹⁰ While there was an effort on the part of some judges to take a harder line on animal cruelty in the eighteenth century, there was no legislation that effectively helped them in these efforts.¹¹

Perhaps because of the horrific circumstances of many animals, the pronouncements of those calling for better treatment were beginning to have an impact on the law in the late eighteenth century, as some laws were passed that seemed to have as their foundation the protection of animals for their own sakes.¹² It was not until the nineteenth century, however, that these voices were heard with clarity; it

¹ See Richard D. Ryder, *Animal Revolution: Changing Attitudes towards Speciesism* 55 (Berg 2000) (examining publication of popular articles on animal-welfare topics in the eighteenth century).

² *Id.* at 56.

³ *Id.* at 56–57.

⁴ *Id.* at 57.

⁵ See e.g. Jeremy Bentham, *An Introduction to the Principles of Morals and Legislation* 310–11 n. 1 (Gaunt Inc. 2001) (arguing that avoiding cruelty is not premised on whether animals can reason but, rather, on whether they can suffer).

⁶ Ryder, *supra* n. 1, at 61–62.

⁷ *Id.* at 62–63.

⁸ *Id.* at 63–64.

⁹ *Id.* at 65–67.

¹⁰ *Id.* at 72–74.

¹¹ *Id.* at 77.

¹² *Infra* sec. B.

is then that laws began to be passed in earnest for the protection of animals themselves, rather than for the various human purposes that we saw in earlier epochs. These laws, those having as their purpose the protection of animals *for the sake of the animals*, are what I refer to as laws having the motivation of “animal protection.”

B. *The Advent of Animal-Cruelty Laws*

The eighteenth- and nineteenth-century voices clamoring for protection of animals ultimately translated into, among other things, some of the first animal-cruelty laws intended to protect animals for their own sakes. In 1822, the United Kingdom (U.K.) passed Martin’s Act, the first animal-cruelty law in the U.K.¹³ This law made cruelty to cattle, horses, sheep, mules, and asses criminal.¹⁴ This law was predated by one year by an animal-cruelty law in the State of Maine in the United States (U.S.).¹⁵

These were not necessarily the very first general animal-cruelty laws. It can be argued that the Puritan “Body of Liberties” from the Massachusetts Bay Colony actually may have the honor of being the earliest animal-cruelty law.¹⁶ This law stated: “No man shall exercise any Tirranny or Crueltie towards any brute Creature which are usuallie kept for man’s use.”¹⁷ It also made it legal to rest your animals in open areas when driving them.¹⁸ Note that these provisions only protected animals kept for use by humans, those “usuallie kept for man’s use.”¹⁹ So whatever other purposes this law may have had, one of its supporting pillars was protecting the property rights of humans in their domestic animals. It attempted to ensure that people would not have their animal property abused.²⁰ According to Diane Beers, this animal-protection law arose from Puritan views of “charity, virtue, discipline, and predestined salvation.”²¹ So protection of property rights and religious zeal were the bases of the Body of Liberties provisions. So while the Body of Liberties might be argued to be the first law fo-

¹³ Steven M. Wise, *Rattling the Cage: Toward Legal Rights for Animals* 43–44 (Perseus Bks. 2000).

¹⁴ David Favre & Vivien Tsang, *The Development of the Anti-Cruelty Laws during the 1800s*, 1993 Det. C.L. Rev. 1, 4 (1993).

¹⁵ Wise, *supra* n. 13, at 44.

¹⁶ *See id.* at 43 (“The Puritans of the Massachusetts Bay Colony, who did not hesitate to change the common law, enacted not just pathbreaking protections for women, children, and servants but the West’s first animal protection laws.”); *see also* Gerald Carson, *Men, Beasts, and Gods: A History of Cruelty and Kindness to Animals* 71 (Charles Scribner’s Sons 1972) (describing the historical background of the creation of the Body of Liberties); Ryder, *supra* n. 1, at 50 (describing the Body of Liberties in the context of other early animal statutes).

¹⁷ Diane L. Beers, *For the Prevention of Cruelty* 19 (Swallow Press 2006) (quoting the Body of Liberties [§§ 92–93] (1641)).

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.* at 20.

²¹ *Id.*

cused on the protection of animals for their own sakes, it seems that it can be better said that, in reality, its purpose was to protect property, thereby serving an economic motive, and to promote a particular religious view and behavior consistent with that religious view—conforming to the religious and social engineering motivations discussed earlier.

Whoever deserves honors for the first true animal-cruelty law, it cannot be denied that after passage of Martin's Act there was considerable furious activity relating to English animal-cruelty laws during the 1800s. By the 1850s, Martin's Act had been revised to include other domestic animals, and to prohibit bull baiting and animal fighting.²² There are many examples of laws relating to the treatment of animals passed by the British Parliament during this era. For instance, after all of the temporary bans on animal baiting and fighting on certain days and in certain places over the centuries, baiting and fighting were finally prohibited in England in 1835.²³ Unfortunately, this law had a loophole: it did not prohibit rat fighting, thereby causing the ironic and unintended effect of encouraging rat fighting.²⁴

The Metropolitan Police Act of 1839, covering London and certain environs, made keeping, using, or managing the fighting or baiting of bears, lions, cocks, dogs, or other animals illegal.²⁵ But this is not all. This legislation also made it illegal to be present at an animal-fighting or animal-baiting event,²⁶ prohibited the abandonment of animals,²⁷ outlawed urging animals to attack people or other animals,²⁸ barred the pelting of cattle,²⁹ and prohibited the use of dogcarts after January 1, 1840.³⁰ There were also acts preventing cruelty in slaughterhouses and requiring cleaning of slaughterhouses, including the Market and Fairs Clauses Act of 1847 and the Towns Improvement Clauses Act of 1847.³¹

But perhaps the most comprehensive British law of the era was the Cruelty to Animals Act of 1849. This law repealed prior animal-cruelty laws and was intended to be more effective than prior stat-

²² *Id.* at 22.

²³ Ryder, *supra* n. 1, at 84.

²⁴ *Id.* at 95.

²⁵ Metropolitan Police Act 1839 (2 & 3 Vict c 47), s 47 (available at <http://www.legislation.gov.uk/ukpga/Vict/2-3/47/contents> (accessed Apr. 14, 2013)).

²⁶ *Id.*

²⁷ *Id.* at s 54(2).

²⁸ *Id.*

²⁹ *Id.* at s 54(3).

³⁰ *Id.* at s 56.

³¹ Markets and Fairs Clauses Act 1847 (10 & 11 Vict c 14) s 42 (available at <http://www.legislation.gov.uk/ukpga/Vict/10-11/14/contents> (accessed Apr. 14, 2013)); Towns Improvement Clauses Act 1847 (10 & 11 Vict c 34) s 128 (available at <http://www.legislation.gov.uk/> (accessed Apr. 14, 2013)).

utes.³² Not surprisingly, animal fighting and baiting were barred by this Act.³³ In addition, it prohibited a list of behaviors including cruelly beating, ill-treating, or overdriving domestic animals, and provided a fine of up to £5 for violations of this aspect of the law.³⁴ Compensation of up to £10 was provided for violations of the cruelty law causing damage to persons, animals, or property.³⁵ This provision for compensation for damages was not exclusive, however; the injured party could also recover any damages that may have been available under the law outside of the Act.³⁶ Transportation of animals was also covered under the Cruelty to Animals Act of 1849. Transporting animals in a way causing unnecessary pain or suffering was a violation of the Act and was subject to up to a £3 fine for the first offense.³⁷ If a transgressor failed to pay the fine or damages imposed, he or she could be put in jail for up to two months.³⁸ One limitation of the Act, though, was that it applied only to domestic animals.³⁹ Interestingly, the Act did not apply to Scotland,⁴⁰ but there were other laws that did.⁴¹

The proliferation of animal laws in England did not, however, stop in 1850. The Metropolitan Market Act of 1851 allowed commissioners to regulate the markets for sale of horses and cattle, including their cleanliness and acts of cruelty that might take place in the markets.⁴² Protection and incentives for those caring for the animals of others were bestowed by the Cruelty to Animals Act of 1854.⁴³ This Act allowed people who fed and cared for impounded animals to receive up to two times the amount spent on food and water from the owner of the

³² Cruelty to Animals Act 1849 (12 & 13 Vict c 92) s 1 (available at <http://www.animalrightshistory.org/animal-rights-law/victorian-legislation/1849-uk-act-cruelty-to-animals.htm> (accessed Apr. 14, 2013)).

³³ *Id.* at s 3.

³⁴ *Id.* at s 2.

³⁵ *Id.* at s 4.

³⁶ *Id.*

³⁷ *Id.* at s 12.

³⁸ Cruelty to Animals Act 1849, s 18.

³⁹ *Id.* at s 29.

⁴⁰ *Id.* at s 30.

⁴¹ See Police and Improvement (Scotland) Act 1850 (13 & 14 Vict c 33) (available at <http://www.animalrightshistory.org/animal-rights-law/victorian-legislation/1862-uk-act-police-improvement-scotland.htm> (accessed Apr. 14, 2013)) (imposing penalties up to £5 for cruelty and lack of cleanliness in slaughterhouses); Cruelty to Animals (Scotland) Act 1850 (13 & 14 Vict c 92) (available at <http://www.animalrightshistory.org/animal-rights-law/victorian-legislation/1850-uk-act-cruelty-to-animals.htm> (accessed Apr. 14, 2013)) (providing for penalties of up to £5 in cases of cruel treatment and management or encouragement of fighting or baiting, and authorizing the imprisonment of offenders who fail to pay for up to two months).

⁴² Metropolitan Market Act 1851 (14 & 15 Vict c 61) s 6 (available at <http://www.animalrightshistory.org/animal-rights-law/victorian-legislation/1851-uk-act-metropolitan-market.htm> (accessed Apr. 14, 2013)).

⁴³ Cruelty to Animals Act 1854 (17 & 18 Vict c 60) (available at <http://www.animalrightshistory.org/animal-rights-law/victorian-legislation/1854-uk-act-cruelty-to-animals.htm> (accessed Apr. 14, 2013)).

animal.⁴⁴ It further allowed the caregiver to sell the animal to collect the money.⁴⁵ The prohibition on the use of dogcarts, compelled in the Metropolitan Police District by the Metropolitan Police Act of 1839, was extended to all of Great Britain under this 1854 law as well.⁴⁶ In one of the many ironies of animal law, these laws had an unintended, unexpected, and unfortunate effect: after the ban on dogcarts, dogs that were previously used to pull carts were frequently killed by their owners.⁴⁷

So what was the impetus behind this flurry of British legislative activity in the 1800s? Harriet Ritvo contends that certain social and scientific forces led to the change.⁴⁸ She argues that in nineteenth-century England animals were, as we know, mere pieces of property.⁴⁹ Animals and nature were not, however, the uncontrollable and mysterious forces that they had been in preceding historical periods, and animals were not now thought to have the mysterious and perhaps demonic powers that had previously been attributed to them.⁵⁰ All of this power was now appropriated by humans.⁵¹ While previously humans had felt themselves at the mercy of natural forces, the advent of modern science and engineering brought the natural world under the control of humans.⁵² Once nature was under control, “it could be viewed with affection and even . . . with nostalgia. Thus, sentimental attachment to both individual pets and the lower creation in general—a stock attribute of the Victorians—became widespread in the first half of the nineteenth century.”⁵³

In what can be argued to follow from man’s perceived domination of nature, animals in this, like other historic periods, were categorized in a hierarchy.⁵⁴ As we have seen previously, this kind of hierarchical thinking often had religious motivations.⁵⁵ This hierarchy was, none-

⁴⁴ *Id.* at s 1.

⁴⁵ *Id.*

⁴⁶ *Id.* at s 2.

⁴⁷ Erica Fudge, *A Left-Handed Blow: Writing the History of Animals*, in *Representing Animals* 19, 28 (Nigel Rothfels ed., Ind. U. Press 2002).

⁴⁸ Harriet Ritvo, *The Animal Estate: The English and Other Creatures in the Victorian Age* 2–3 (Harvard U. Press 1987).

⁴⁹ *Id.* at 2.

⁵⁰ *See id.* at 1–2 (indicating that earlier paradigms were more comfortable investing both humans and animals with independent agency).

⁵¹ *See id.* (arguing that by removing agency from animals, the emerging paradigm transferred intent and responsibility to people as the owners of animals, the agents interacting with them, or both).

⁵² *Id.* at 3.

⁵³ *Id.* at 3.

⁵⁴ *See Ritvo, supra* n. 48, at 11–12, 15–16 (noting that the ordering schemes for Victorian animal hierarchies vary but tend to rank most highly animals judged as useful to—or trainable by—people).

⁵⁵ *E.g.* J. J. Finkelstein, *The Ox That Gored*, 71 *Transactions Am. Phil. Socy.* 5, 46 (1981) (noting that the Abrahamic religions conceptualize existence as an ordered hierarchy, and tend to place humans—as the physical beings nearest to divinity—at the top of this order).

theless, overturned as a matter of science by Charles Darwin.⁵⁶ Through Darwin's scholarship, we came to understand that there are mental and emotional similarities between humans and animals,⁵⁷ that there is continuity between species, and that the wide gulf previously thought to separate humans and animals was a mere muddy puddle.⁵⁸ This biological egalitarianism, however, seemed to have little effect on hierarchical thought of the time,⁵⁹ which continued in spite of scientifically established propositions.⁶⁰ So, according to Ritvo, we can view the momentum in animal law in Britain in the nineteenth century as a reflection of the conquering of nature by man. Now, however, the continuing hierarchical thought need not be attributed to the supernatural; rather, it was a consequence of the might of human science (except, of course, Darwin's science contrary to a hierarchical view), and engineering conquering nature. Now that the battle with nature had been won, humans could look upon nature with kindness and grace, and fashion "sentimental" protections against cruelty to animals.

The thought of Jeremy Bentham must be acknowledged as another factor pushing the animal-cruelty agenda forward. Bentham focused on the suffering of animals, believing that they suffer in the same way as humans, and proposed that the interests of animals to be free from suffering must be considered equally with the suffering of humans.⁶¹ Not surprisingly, it has been argued that these laws protecting animals were conceived out of a Benthamite view of the suffering of animals and were a response to this line of thought.⁶²

Animal-cruelty laws were not confined to England. Similar laws began to be passed elsewhere, including in the U.S., although it took some decades for the U.S. to come close to catching up with Britain (and I think it accurate to say that the U.S. has never quite "caught up"). Nonetheless, as mentioned previously, the State of Maine passed its 1821 animal-cruelty statute just prior to Britain's Martin's Act.⁶³ The Maine law made it a crime to cruelly beat horses or cattle, and

⁵⁶ Ritvo, *supra* n. 48, at 39.

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ Indeed, the hierarchical view of the human-animal relationship continues to be quite healthy today despite mountains of evidence confirming Darwin's thought. *See e.g. Theorizing Animals: Re-thinking Humanimal Relations* 73-74 (Nik Taylor & Tania Signal eds., Brill 2011) ("Many humans are interested in establishing and maintaining an 'unbridgeable gap' between humans and 'other' animals, some way of self-defining that justifies our sense of hierarchy in which we stand on top of all other species, excluding these 'others' from the moral community, allowing us to exploit 'them.'").

⁶⁰ *See* Ritvo, *supra* n. 48, at 40-41 (By conceptualizing biological hierarchies as a result of a perpetual survival struggle, some scholars used Darwin's work to legitimize traditional anthropocentric orders of being. The ability of humans to exercise control over animals demonstrated that humans were evolutionary victors, a position that, in turn, proved humanity's distinction from—and superiority to—animals.).

⁶¹ John Passmore, *The Treatment of Animals*, 36 *J. Hist. Ideas* 195, 211 (1975).

⁶² *Id.* at 211-12.

⁶³ Wise, *supra* n. 13, at 44.

created penalties of a \$2.00 to \$5.00 fine, or up to thirty days in prison.⁶⁴ Only commercially valuable animals were covered by this statute; even our most familiar companion animals, dogs and cats, were outside its scope.⁶⁵ This was not a statute, however, that protected covered animals only from the cruelty of strangers; a violation existed if you were cruel to your own animal.⁶⁶ So this law not only shows concern for the protection of the property of another from damage, but it also reveals a societal interest in protection of the animal itself.⁶⁷

New York became a state with an animal-cruelty law in 1829.⁶⁸ Its law made maliciously killing, maiming, or wounding the horses, oxen, sheep, or cattle of another, or maliciously and cruelly beating any such animal, regardless of ownership, a misdemeanor.⁶⁹ The first aspect of this law, concerning the malicious killing or maiming of an animal, protected the property of others from harm; the latter part, covering malicious and cruel beatings, protected animals regardless of ownership.⁷⁰ So if a person kills his own horse by a beating, the killing is not a crime but the beating is. Neglect is not a violation of the law; the law does not require affirmative acts to care for animals.⁷¹

Vermont passed an animal-cruelty statute in 1846.⁷² It prohibited the killing, wounding, disfiguring, or maiming of horses, cattle, sheep, or swine.⁷³ It did not prohibit cruelty per se but rather prohibited a set of specified actions.⁷⁴ Like the Maine statute, only certain animals of economic value were covered and the apparent goal of the provision was to protect property.⁷⁵ Unlike the Maine statute, this law did not make it a crime to harm your own animal, an ownerless animal, or a wild animal—only those animals owned by others.⁷⁶ There were, however, stiff penalties for violation of this law. Contraventions of its strictures were felonies with penalties of up to five years in prison.⁷⁷

After these initial forays into providing some protection for animals, more substantial change was wrought in the U.S. through the efforts of societies for the prevention of cruelty to animals. The initial impetus and motivating force behind much of this activity in the latter part of the nineteenth century was Henry Bergh. Bergh formed the American Society for the Prevention of Cruelty to Animals (ASPCA) in

⁶⁴ 1834 Me. Laws 59; Favre & Tsang, *supra* n. 14, at 8.

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.* at 9.

⁶⁹ *Id.*

⁷⁰ Favre & Tsang, *supra* n. 14, at 6.

⁷¹ *Id.*

⁷² *Id.* at 7.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ Favre & Tsang, *supra* n. 14, at 5.

⁷⁷ *Id.* at 7.

1866.⁷⁸ In this period of history, cruelty to animals and children were intertwined, and Henry Bergh ultimately founded groups on both issues.⁷⁹ Bergh's involvement with issues of cruelty to children began when a church worker asked for Bergh's help concerning an abused child, and Bergh used a legal advisor to the ASPCA to commence court proceedings to protect the child.⁸⁰ This was the seed that ultimately blossomed into the New York Society for the Prevention of Cruelty to Children in 1874.⁸¹ Indeed, during the late 1800s and early 1900s, many animal-cruelty organizations were involved in child-abuse matters as well.⁸² In 1910, for instance, of 434 U.S. humane societies, 247 were for children and animals, and 131 for animals alone.⁸³ In 1922, there were 539 humane societies, with 307 for children and animals, and 175 for animals only.⁸⁴

It is something of a mystery why Bergh pursued his animal-cruelty agenda with such fervor, and a number of views of his personal motivations have been asserted. While there seems to be some uncertainty about how Bergh felt about different species of animals, it has been said that Bergh apparently did not love horses⁸⁵ and disliked dogs.⁸⁶ He was always calm and of steady nerves, even in the face of sights of physical pain, so he was not moved by "hysterical sympathy."⁸⁷ Not surprisingly then, it has been urged that the foundation for his views and actions was not so much love of animals but, rather, a moral position based on his Unitarian religious beliefs.⁸⁸ It has also been claimed that his views came from an abstract sense of justice, not out of sentiment.⁸⁹ Another way of saying this is that he simply saw the issues as moral ones.⁹⁰ He believed, for example, in the Kantian notion that "[m]en will be just to men when they are kind to animals."⁹¹ In this same vein, Bergh is characterized as having held his views for the purpose of the ultimate preservation of man's worth.⁹² One argument made by Bergh himself in favor of animal-cruelty laws was that there was a great economic cost in cruelty: contaminated

⁷⁸ *Id.* at 13.

⁷⁹ William J. Shultz, *The Humane Movement in the United States, 1910-1922* 11, 14 (Columbia U. Press 1924).

⁸⁰ Mason P. Thomas, Jr., *Child Abuse and Neglect Part I: Historical Overview, Legal Matrix, and Social Perspectives*, 50 N.C. L. Rev. 293, 307 (1972).

⁸¹ *Id.* at 307-08.

⁸² Shultz, *supra* n. 79, at 17.

⁸³ *Id.* at 24.

⁸⁴ *Id.*

⁸⁵ It has been said, however, that Bergh had some special feelings for horses. Carson, *supra* n. 16, at 98-99.

⁸⁶ *Id.* at 98; Clara Morris, *Riddle of the Nineteenth Century: Mr. Henry Bergh*, 18 McClure's Mag. 414, 418, 422 (1902).

⁸⁷ Morris, *supra* n. 86, at 422.

⁸⁸ Beers, *supra* n. 17, at 43-44.

⁸⁹ Carson, *supra* n. 16, at 98.

⁹⁰ *Id.* at 99.

⁹¹ *Id.* at 105.

⁹² *Id.* at 117.

food, the horrors of the cattle train that endangered the meat supply, and the like.⁹³ Throwing in the towel perhaps in trying to explain Bergh's motives, it has also been argued that Bergh was just "born for his work."⁹⁴

Whatever propelled Bergh, what he did was support new and amended laws on animal cruelty. The changes in New York law in the 1800s, many of which Bergh participated in, show how such laws evolved and expanded during this period. For instance, changes were made in 1866 to the 1829 New York law, but it still contained the requirement of a "malicious" intent and only applied to economically valuable animals.⁹⁵ In a step forward, changes to this law made it unlawful to abandon horses or mules.⁹⁶ The 1867 New York law went quite a bit further. First, it applied to any "living creature," not just animals of economic value.⁹⁷ Second, ownership of the animal was not relevant under this law; an owner could violate the law in the same way as non-owners.⁹⁸ Third, the need to act "maliciously" to violate the law was removed, making the issue not the malicious intent of the person but the harm inflicted on the animal.⁹⁹ Fourth, transport of animals was now covered.¹⁰⁰ Fifth, certain affirmative duties were created, including requirements to provide proper food and water to kept animals.¹⁰¹ Sixth, animal fighting was banned.¹⁰² Finally, in a fascinating provision that has had significant influence in enforcement of animal-cruelty laws in the U.S., the law gave power to the ASPCA to arrest and prosecute violators. Thus, a private organization was given enforcement power under criminal laws.¹⁰³

This latter aspect of the 1867 law bears further consideration. It can hardly be gainsaid that it is unusual to give private parties the right to enforce criminal laws in this manner.¹⁰⁴ Since early animal-cruelty laws had no enforcement mechanisms, however, they were rather ineffectual.¹⁰⁵ It was this mechanism of granting private animal-protection organizations official enforcement authority, illustrated by this New York law, that finally gave these prohibitions real teeth.¹⁰⁶ Henry Bergh himself personally enforced the New York law

⁹³ *Id.* at 96.

⁹⁴ Morris, *supra* n. 86, at 422.

⁹⁵ Favre & Tsang, *supra* n. 14, at 14.

⁹⁶ *Id.* at 15.

⁹⁷ *Id.* at 15–16.

⁹⁸ *Id.* at 16.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ Favre & Tsang, *supra* n. 14, at 16.

¹⁰² *Id.*

¹⁰³ *Id.* at 17.

¹⁰⁴ *See id.* at 17–18 ("This delegation of state criminal authority to a private organization was, and is, truly extraordinary.").

¹⁰⁵ Beers, *supra* n. 17, at 61.

¹⁰⁶ *Id.* at 60–61.

on many occasions.¹⁰⁷ In fact, perhaps one of the most interesting aspects of Bergh's work was his personal enforcement of animal-cruelty laws; he made numerous arrests, and faced more than his share of angry and potentially violent people in the process.¹⁰⁸

That these laws were now intended to benefit animals themselves, in addition to developing virtuous traits in humans, is shown by the following quote from an 1888 Mississippi case:

This statute is for the benefit of animals, as creatures capable of feeling and suffering, and it was intended to protect them from cruelty, without reference to their being property, or to the damages which might thereby be occasioned to their owners. . . . [L]aws, and the enforcement or observance of laws, for the protection of dumb brutes from cruelty, are, in my judgment, among the best evidences of the justice and benevolence of men. Such statutes were not intended to interfere, and do not interfere, with the necessary discipline and government of such animals, or place any unreasonable restriction on their use or the enjoyment to be derived from their possession. The common law recognized no rights in such animals, and punished no cruelty to them, except in so far as it affected the right of individuals to such property. Such statutes remedy this defect To disregard the rights and feelings of equals, is unjust and ungenerous, but to willfully or wantonly injure or oppress the weak and helpless, is mean and cowardly. Human beings have at least some means of protecting themselves against the inhumanity of man,—that inhumanity which “makes countless thousands mourn,”—but dumb brutes have none. Cruelty to them manifests a vicious and degraded nature, and it tends inevitably to cruelty to men. Animals whose lives are devoted to our use and pleasure, and which are capable, perhaps, of feeling as great physical pain or pleasure as ourselves, deserve, for these considerations alone, kindly treatment. The dominion of man over them, if not a moral trust, has a better significance than the development of malignant passions and cruel instincts. Often their beauty, gentleness, and fidelity suggest the reflection that it may have been one of the purposes of their creation and subordination to enlarge the sympathies and expand the better feelings of our race. But, however this may be, human beings should be kind and just to dumb brutes; if for no other reason than to learn how to be kind and just to each other.¹⁰⁹

As this court's analysis demonstrates, the voices of concern for animals raised in the eighteenth century bore fruit in the nineteenth century and thereafter. In the dust and filth of the burgeoning Industrial Revolution, cruelty practiced on animal and child alike became the target of reformers like Henry Bergh. Yet the calls of these reformers were not primarily focused on the economic value of animals or in seeing that the divinely ordained order be preserved; rather, the legislation they championed was predominantly driven by the desire to protect animals qua animals, for what I have called “animal-protec-

¹⁰⁷ Morris, *supra* n. 86, at 418–19, 421.

¹⁰⁸ *Id.*

¹⁰⁹ *Stephens v. State*, 3 So. 458, 458–59 (Miss. 1888).

tion” purposes. This was a new direction for animal law and it did not end with anti-cruelty laws.

C. Other Developments in Recent Modern Law

1. Regulation of Vivisection

There were many types of laws passed for the purpose of protecting animals after animal-cruelty laws began the process of bringing these issues to legislative chambers. One of the most contentious animal-treatment issues of the nineteenth century—which persists today—was animal experimentation. Many animal-protection advocates saw vivisection as an abomination and pressed for prohibitions or restraints on the practice.¹¹⁰

In the U.K., vivisection has been subject to regulation since 1876, when Parliament passed the Cruelty to Animals Act of 1876, more popularly known as the Anti-Vivisection Act of 1876 (AVA).¹¹¹ Queen Victoria was very concerned about vivisection, and it has been argued that this is probably why the AVA was enforced quite vigorously.¹¹² While the law purported to apply to any “living animal,”¹¹³ invertebrates were excluded from the “living-animal” club in Section 22 of the AVA.¹¹⁴ The AVA prohibited painful experiments on living animals except as provided in the Act, and provided fines of up to £50 for a first violation, £100 for a second or subsequent offense, and jail sentences of up to three months only on second or subsequent violations.¹¹⁵ The law allowed experiments if undertaken for certain purposes, such as developing physiological knowledge and saving or prolonging human life.¹¹⁶ To engage in these sorts of activities, however, an experimenter was required to have a license.¹¹⁷ The law also provided that the Secretary of State could require registration of facilities performing experiments and must register those facilities where experiments for educational purposes were performed.¹¹⁸ The Secretary of State could also require the submission of reports on experiments¹¹⁹ and was to inspect licensed facilities.¹²⁰

¹¹⁰ See Shultz, *supra* n. 79, at 146–48 (providing an overview of the first anti-vivisection groups and their goals, ranging from “total elimination of all forms of animal experimentation” to regulation of vivisection through licensing, inspections, and mandates on anesthetic use).

¹¹¹ Cruelty to Animals Act 1876 (39 & 40 Vict c 77) (available at <http://www.animalrightshistory.org/animal-rights-law/victorian-legislation/1854-uk-act-cruelty-to-animals.htm> (accessed Apr. 14, 2013)) [hereinafter Anti-Vivisection Act of 1876].

¹¹² Ryder, *supra* n. 1, at 107.

¹¹³ Anti-Vivisection Act of 1876, s 2.

¹¹⁴ *Id.* at s 22.

¹¹⁵ *Id.* at ss 2, 6.

¹¹⁶ *Id.* at s 3(1).

¹¹⁷ *Id.* at s 3(2).

¹¹⁸ *Id.* at s 7.

¹¹⁹ Anti-Vivisection Act of 1876, s 9.

¹²⁰ *Id.* at s 10.

The conduct of experiments was also regulated to a degree. Anesthetic was to be provided to animals in pain at all times during experiments, and the experimenter was required to kill an animal if it would continue to have pain after the anesthetic was discontinued.¹²¹ But this, as it turns out, was a rule with a major exception: experiments without anesthetic were permitted if using anesthetic would frustrate the purpose of the experiment.¹²² Certain animals were lucky enough to be given special treatment in the AVA. Special permission was required to use cats, dogs, horses, asses, and mules, and the experimenter was required to show that it was necessary to use one of these kinds of animals in the experiment before such a request would be granted.¹²³ Special dispensation of this kind for animals of special concern, like companion animals, is common in legislation relating to vivisection.¹²⁴

This law has evolved into the present U.K. law, the Animals (Scientific Procedures) Act, which follows generally the same structure as the AVA, requiring licensing of experimenters and providing specific regulation of certain practices of vivisectionists.¹²⁵ Note also that even in the late 1800s there was discussion of reaching a time when science would find a mechanism for making animal experimentation a thing of the past.¹²⁶ Unfortunately, more than 100 years later, we have found no such solution and humans continue to engage in this experimentation. Consider as well that the efficacy of animal experimentation is still being grappled with by scientists and ethicists across the globe.¹²⁷

England was and actually still is ahead of the U.S. in regulating animal experimentation. Nonetheless, the father of animal-protection laws in the U.S., Henry Bergh, was not bounded in his concerns by animal-cruelty laws. It can be said that the anti-vivisection movement in the U.S. began with Henry Bergh as well.¹²⁸ In fact, he proposed laws that would have outlawed vivisection in 1880.¹²⁹ There were, of course, others who spoke out against animal experimentation during this era in the U.S.: Mark Twain was against vivisection and wrote *A Dog's Tale* about it.¹³⁰ There were also numerous legislative efforts to

¹²¹ *Id.* at ss 3(3), 3(4).

¹²² *Id.* at s 3(6)(1).

¹²³ *Id.* at s 5.

¹²⁴ See Thomas G. Kelch, *Globalization and Animal Law: Comparative Law, International Law and International Trade* 134 (Kluwer L. Intl. 2011) ("The discovery that your dog Snuffy had ended up in an animal experiment because she happened to get loose engenders great outrage. In fact, exactly this issue served as the genesis of the United States Animal Welfare Act.").

¹²⁵ Animals (Scientific Procedures) Act 1986 (available at <http://www.legislation.gov.uk/ukpga/1986/14/contents> (accessed Apr. 14, 2013)).

¹²⁶ Shultz, *supra* n. 79, at 146–47.

¹²⁷ See Kelch, *supra* n. 124, at 120–30 (providing an overview of current arguments for and against animal experimentation).

¹²⁸ Shultz, *supra* n. 79, at 141.

¹²⁹ *Id.* at 142.

¹³⁰ Beers, *supra* n. 17, at 133–34.

end or regulate vivisection during this period.¹³¹ Despite the labors of people such as Bergh and Twain, what passed for comprehensive federal legislation on animal experiments in the U.S. did not occur until the 1960s.

This law was the Laboratory Animal Welfare Act of 1966 (AWA). This act was passed largely in response to highly publicized stories about stolen house pets used in experiments.¹³² One of the most influential pieces of media coverage leading to the passage of the AWA was a story in *Life* magazine revealing the horrors involved in the treatment of dogs delivered for biomedical research.¹³³ It was estimated that, at the time the law was passed, up to 50% of missing pets had been taken by “bunchers” who sold pets for experiments.¹³⁴

Substantively, one can argue about whether the AWA really does comprehensively regulate animal experimentation. There is no true external control over the experiments themselves nor the pain involved in them; the protection essentially ends when the scientist gains possession of the animal.¹³⁵ Some of the law’s strongest provisions were contained in the amendments of 1970, requiring humane care for animals at all points in the experimental process and demanding pain medication (except where it interferes with the experiment).¹³⁶ Amendments have, in addition, provided for standards of care for animals in zoos, circuses, and other exhibitions.¹³⁷ So the recent modern period has seen the development of some laws relating to vivisection, but the level and detail of the regulation of vivisection has varied considerably in different Western countries.

2. Other Laws, Other Countries

The recent modern period has produced a considerable number of animal laws, involving a fairly large number of countries, and these laws include provisions extending beyond traditional areas of regulation like animal cruelty and vivisection. One area that received a large

¹³¹ See Shultz, *supra* n. 79, at 152–61 (providing an overview of several federal and state anti-vivisection bills introduced during the early 1900s by animal-protection groups).

¹³² Sen. Rpt. 89-1281 (June 15, 1966) (reprinted in 1966 U.S. Code Cong. & Admin. News 2635, 2635); Beers, *supra* n. 17, at 170–77; Tadlock Cowen, *The Animal Welfare Act: Background and Selected Legislation* 1 (Cong. Research Serv. Sept. 9, 2010) (available at <http://www.nationalaglawcenter.org/assets/crs/RS22493.pdf> (accessed Apr. 14, 2013)); Joseph Mendelson, III, *Should Animals Have Standing? A Review of Standing under the Animal Welfare Act*, 24 B.C. Env'tl. Aff. L. Rev. 795, 795 (1996).

¹³³ Benjamin Adams & Jean Larson, *Legislative History of the Animal Welfare Act*, <http://www.nal.usda.gov/awic/pubs/AWA2007/intro.shtml> (accessed Apr. 14, 2013); Ryder, *supra* n. 1, at 201.

¹³⁴ Beers, *supra* n. 17, at 176.

¹³⁵ *Id.* at 177–78; see 7 U.S.C. §§ 2132(c), 2136, 2142, 2143, 2143(a)(6) (2006) (authorizing regulation for the commerce, sale, and handling of animals, but including exceptions for research).

¹³⁶ 7 U.S.C. § 2143 (2006); Beers, *supra* n. 17, at 178.

¹³⁷ 7 U.S.C. § 2143 (2006); Beers, *supra* n. 17, at 178.

amount of attention in the early part of the twentieth century was protection of wildlife. For example, in Britain, the protection of wild animals in captivity was addressed in the Wild Animals in Captivity Protection Act of 1900.¹³⁸ During this same period, there was particular concern about the extinction of birds with attractive plumage, since the women's fashion rage at the time was hats adorned with the feathers of birds.¹³⁹ As an example, the Titanic found its way to the bottom of the Atlantic with forty containers of feathers for women's hats, valued at today's equivalent of \$2.3 million.¹⁴⁰ To address issues relating to, among other things, bird plumage and hunting, the Lacey Game and Wild Birds Preservation and Disposition Act of 1900 made it a U.S. federal offense to engage in interstate shipments of animals (birds or mammals) or their products in violation of state laws or the laws of any foreign jurisdictions.¹⁴¹ The same issue was addressed again in the Weeks–McLean Migratory Bird Act of 1913, which provided direct federal regulation and protection of wild birds, and gave power to the Secretary of Agriculture to close hunting seasons.¹⁴² This issue was also tackled in the Convention between the United States and Great Britain for the Protection of Migratory Birds in the United States and Canada in 1916.¹⁴³

Animal fighting was also a concern in the early 1900s. Animal fighting was banned in almost all states in the U.S. in the early 1900s.¹⁴⁴ Notice, however, that the same kind of classism that we saw in laws of earlier eras reemerges in this period. While animal fighting, a “sport” primarily of the lower classes, was banned, the activities of the upper classes, such as pigeon shoots and fox hunting, were matters that animal-advocacy groups were not very successful at ending.¹⁴⁵ So while the culture of the lower classes could again be bent and swayed in the name of animal protection, the practices of the more aristocratic of the populace were not so easily overcome by animal-welfare efforts.¹⁴⁶

¹³⁸ Wild Animals in Captivity Protection Act 1900 (63 & 64 Vict c 33) (available at <http://www.animalrightshistory.org/animal-rights-law/victorian-legislation/1900-uk-act-wild-animals-captivity.htm> (accessed Apr. 14, 2013)).

¹³⁹ James B. Trefethen, *An American Crusade for Wildlife* 129 (Winchester Press 1975).

¹⁴⁰ Thor Hanson, *Feathers: The Evolution of a Natural Miracle* 176 (1st eBook ed., Basic Bks. 2011).

¹⁴¹ 16 U.S.C. §§ 3371–3378 (2006); Trefethen, *supra* n. 139, at 122.

¹⁴² Pub. L. No. 62-430, 37 Stat. 828, 847–48 (1913) (repealed 1918); Trefethen, *supra* n. 139, at 152–53.

¹⁴³ Convention between the United States and Great Britain for the Protection of Migratory Birds art. 2, 6 (signed Aug. 16, 1916) 39 Stat. 1702; Trefethen, *supra* n. 139, at 154–55.

¹⁴⁴ Beers, *supra* n. 17, at 76.

¹⁴⁵ See *id.* at 77–79 (describing the failure of attempts to curb bloodsports popular among the wealthy).

¹⁴⁶ *Id.*

Animal-trapping methods also became a subject of legislation in the early to mid-twentieth century in the U.S. By World War II, thirty-seven states had enacted humane trapping laws for wild animals.¹⁴⁷ These laws were aimed at ending the cruelty of traditional trapping methods.¹⁴⁸

A bit later in the century, we see a bevy of federal laws directed at a large number of concerns relating to animal protection and the environment. One of these laws was the Humane Slaughter Act of 1958. One vital aspect of the genesis of the Humane Slaughter Act was that advocates for this law did not focus on human health problems or moral salvation as reasons to attack conditions in slaughterhouses, as had been their tactic before, but now focused on the animals themselves and asserted that they deserved protection and rights.¹⁴⁹ The Marine Mammal Protection Act and the Endangered Species Act of the 1970s marked a major new concern coming to the fore relating to animals—the emergence of an environmental ethic in the law and the idea of protecting groups or species of animals.¹⁵⁰ The Endangered Species Act, for instance, had the effect of eliminating most domestic traffic in endangered species.¹⁵¹ The environmental movement emphasized the interests not of individual animals to be protected from cruel acts, but of larger groups of wild animals threatened by the carnage caused by the march of human technology and development. So a new prong of the animal-protection debate emerged in the latter half of the twentieth century: the protection of groups of wild animals and the broader ecology in which these animals live.

But it is not just Britain and the U.S. that passed numerous laws relating to animal welfare in the twentieth century. Possibly the most paradoxical development in animal law in the twentieth century was the adoption of strict animal-protection laws in Nazi Germany. In 1933 and 1934, the German government passed animal-protection legislation¹⁵² and these laws were created for the purpose of protecting the animals themselves.¹⁵³ Among the strictures of these laws were ones that made needlessly tormenting an animal a crime that had up to a two-and-a-half year prison term, plus a fine.¹⁵⁴ For other reasons—namely that of persecuting Jews who adhered to kosher slaughter ritu-

¹⁴⁷ *Id.* at 115.

¹⁴⁸ *Id.* at 112–15.

¹⁴⁹ *Id.* at 161–62.

¹⁵⁰ Marine Mammal Protection Act of 1972, 16 U.S.C. §§ 1361–1423h (2006); Endangered Species Act of 1973, 16 U.S.C. §§ 1531–1544 (2006).

¹⁵¹ Trefethen, *supra* n. 139, at 297.

¹⁵² Boria Sax, *Animals in the Third Reich: Pets, Scapegoats, and the Holocaust* 110–11, 116 (Continuum Intl. Publg. Group Inc. 2000) (citing Klemens Giese & Waldemar Kahler, *Das deutsche Tierschutzrecht: Bestimmungen zum Schutz der Tiere* 19–123, 164–75, 277–83, 300–05 (Duncker & Humblot 1944)).

¹⁵³ *Id.* at 111.

¹⁵⁴ *Id.*

als—Germany banned slaughter without anesthesia or stunning.¹⁵⁵ The use of dogs in the hunting chase was also banned in 1933.¹⁵⁶

The later German Law on Animal Protection of 1938¹⁵⁷ was more far-reaching. Like the 1933 law, it forbade the unnecessary torment of animals.¹⁵⁸ “Torment” is unnecessary to the extent it serves no “rational, justifiable purpose.”¹⁵⁹ This law also took a strong stand on animal experimentation, forbidding procedures that might cause appreciable pain or damage, with certain exceptions.¹⁶⁰ It required that pain be avoided to the extent compatible with any experiment allowed under the law,¹⁶¹ and an identified justification for any experiment was mandatory—experiments must have concerned unsolved problems or confirmed empirical matters not previously confirmed.¹⁶² Experiments for judicial purposes, as well as for the purpose of getting blood or obtaining serums or inoculations, were also permitted.¹⁶³ The governmental official given the power to permit animal experiments was the Minister of Interior.¹⁶⁴ Certain animals were given special treatment, as we have seen in other laws. Horses, dogs, cats, and apes could be used in experiments under the 1938 law only if the goals of the experiment could not be achieved through the use of some other species of animal.¹⁶⁵ Note that Hitler apparently wanted to ban experiments on animals altogether, but was persuaded to a compromise on the theory that some individuals always had to be sacrificed for the good of the whole.¹⁶⁶

One might reasonably assert that the provisions of these laws were quite favorable to animals, particularly given the historical context that they were passed in: the 1930s. But not everyone agrees that they were actually new or unusual—Bradley Bobertz, for example, contends that they were really nothing new. He states that Nazi animal-protection laws were not the first laws of their kind, pointing to laws such as the British AVA of 1876.¹⁶⁷

So what was behind the Nazi animal-protection laws? Boria Sax argues that these animal-protection laws were motivated by a set of

¹⁵⁵ See *id.* at 110–11 (noting that the law effectively banned traditional kosher slaughter).

¹⁵⁶ *Id.* at 35.

¹⁵⁷ See Sax, *supra* n. 152, at app. 1, 175–79 (providing a translated version of the German *Law on Animal Protection* from May 23, 1938).

¹⁵⁸ *Id.* at 175.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at 176.

¹⁶¹ *Id.* at 177.

¹⁶² *Id.*

¹⁶³ *Law on Animal Protection*, May 23, 1938 (translated version reprinted in Sax, *supra* n. 152, at app. 1, 177).

¹⁶⁴ *Id.* at 176.

¹⁶⁵ *Id.* at 177.

¹⁶⁶ *Id.* at 112.

¹⁶⁷ Bradley C. Bobertz, Book Review, 22 *Colum. J. Envtl. L.* 353, 386–87 (1997) (reviewing *Of Nature and Nazis*).

contradictory motives, including compassion, “bureaucratic tidiness,” power lust, and xenophobia.¹⁶⁸ Of all of the possible reasons for the laws, however, protection of animals for their own sakes does appear to be a predominant one, although one must obviously be skeptical about the pronouncements of the Nazis. Nonetheless, Sax notes that Nazi laws on animals purported to eschew an anthropocentric basis—animals were theoretically being protected for their own sakes.¹⁶⁹ Support for this motive can be seen, for example, in an official document on the animal-protection laws stating that these laws arose from the love of the German people for animals from time immemorial.¹⁷⁰ Animals were said to be protected by law as a result of being a part of the national community and being useful.¹⁷¹ Restrictions on animal experimentation in 1933 were said to be based on the fact that animals feel pain, have joy, and are loyal and faithful, according to Hermann Göring.¹⁷² In a radio address, he further stated: “To the Germans, animals are not merely creatures in the organic sense, but creatures who lead their own lives and who are endowed with perceptive faculties, who feel pain and experience joy and prove to be faithful and attached.”¹⁷³ On another occasion he stated, “I will commit to concentration camps those who think that they can continue to treat animals as property.”¹⁷⁴

Sax also sees German laws to protect animals as part of a desire to exercise power and take “technocratic control to extremes.”¹⁷⁵ It is, indeed, hard to argue that the motive of power lust was not somewhere in the quiver of Nazi behavior generally. It is also hard to imagine that requiring stunning before slaughter was not aimed at the Jewish practice of kosher slaughter. Nonetheless, there is reason to believe that a primary motive of the laws was to protect animals for their own sakes. Yes, part of this comes from the Nazi’s own statements; but, nevertheless, we have little else to go on and typically take legislators at their word about their purposes, although in this case suspension of such a rule would be understandable. But there are other reasons to believe these statements.

The subsequent history of German animal legislation supports the purported “protecting animals for their own sakes” justification for the 1930s German animal-protection laws. It cannot be denied that Germany has been at the forefront of animal-protection issues since the fall of the Nazi regime. Germany has a modern animal-protection law

¹⁶⁸ Sax, *supra* n. 152, at 114.

¹⁶⁹ *Id.* at 42.

¹⁷⁰ *Id.* at 121.

¹⁷¹ *Id.* at 42.

¹⁷² *Id.* at 111.

¹⁷³ Hal Herzog, *Some We Love, Some We Hate, Some We Eat* 58 (HarperCollins Publishers 2010).

¹⁷⁴ *Id.*

¹⁷⁵ Sax, *supra* n. 152, at 123.

called the *Tierschutzgesetz*.¹⁷⁶ Furthermore, the German Civil Code (*Bürgerliches Gesetzbuch*) provides: “Animals are not things. They are protected by special statutes. They are governed by the provisions that apply to things, with the necessary modifications, except insofar as otherwise provided.”¹⁷⁷ But modern Germans have not stopped here. They have gone beyond legislation and have amended their constitution to provide for protection of animals. Article 20a of the German Constitution (*Grundgesetz der Bundesrepublik Deutschland*) states: “Mindful also of its responsibility toward future generations, the state shall protect the natural foundations of life and animals by legislation and, in accordance with the law and justice, by executive and judicial action, all within the framework of the constitutional order.”¹⁷⁸ So we can look to the subsequent history of Germany to discover that there is, in fact, a culture in Germany favorable to protecting animals and to do so for the sakes of the animals themselves.

During the recent modern period, most Western countries have put into place laws that can be said to protect animals for the sakes of the animals. But not all countries have evolved in the same way; the historic paths of different countries have diverged to a considerable extent. Some countries enacted new laws in the recent modern period that were primarily for economic reasons rather than for purposes of protecting animals themselves. In the Meiji Era of the late 1800s, for example, Japan enacted laws relating to animals.¹⁷⁹ These laws only addressed injuries to people or property, however, and not protection of animals for their own sakes.¹⁸⁰ China is just now discussing the kind of comprehensive animal-cruelty law that Britain enacted in the 1800s.¹⁸¹ But this is not to say that the U.S. and Europe have a mo-

¹⁷⁶ *Tierschutzgesetz* v. 18.5.2006 BGBl I. 2006, p. 1206, 1313 (available at <http://www.gesetze-im-internet.de/bundesrecht/tierschg/gesamt.pdf> (accessed Apr. 14, 2013)); see also Kate M. Natrass, “. . . Und Die Tiere” *Constitutional Protection for Germany’s Animals*, 10 *Animal L.* 283, 287 (2004) (“In 1972, the Bundestag rescinded the old *Tierschutzgesetz* completely and formulated an updated law to reflect the changing needs of animal protection and regulation.”).

¹⁷⁷ § 90(a) I BGB (English version available at http://www.gesetze-im-internet.de/englisch_bgb/ (accessed Apr. 14, 2013)). There is irony here though. Animals are said to not be “things,” but the law that relates to “things” applies to them.

¹⁷⁸ Art. 20a GG (English version available at http://www.gesetze-im-internet.de/englisch_gg/index.html (accessed Apr. 14, 2013)); see Claudia E. Haupt, *The Nature and Effects of Constitutional State Objectives: Assessing the German Basic Law’s Animal Protection Clause*, 16 *Animal L.* 213, 214–15 (2010) (quoting Article 20a of the German Constitution); Kelch, *supra* n. 124, at 272–82 (tracing the creation and content of Germany’s constitutional amendment on animal treatment).

¹⁷⁹ Peter Paul, *Some Origins of Laws and Legal Codes Regarding Animals, Part III*, 5 *Community Animal Control* 16, 26 (1986).

¹⁸⁰ *Id.*

¹⁸¹ See e.g. Wang Qian, *Draft Law to Punish Animal Cruelty* (June 19, 2009) (available at http://www.chinadaily.com.cn/china/2009-06/19/content_8300745.htm (accessed Apr. 14, 2013)) (discussing a draft of China’s first proposed anti-cruelty law, which includes breeding prohibitions and data chip implant requirements to curb pet abandonment, with suggested penalties of fines and two weeks detention).

nopoly on animal-protection laws; Australia and New Zealand have also created what can be characterized as laws in line with the animal-protection motive.¹⁸² Moreover, it is not just countries with Western cultural backgrounds that have had rules that are for the protection of animals themselves. India has had numerous laws that can be said to be based on principles of animal protection.¹⁸³ Similarly, in the Northern Luzon province of the Philippines, the Ifugao Tribe had a law that stated: “Animals are attributed with legal personalities. It is an assault of a personal nature to maliciously kill an animal.”¹⁸⁴

So while laws develop in fits and starts, and at different rates in different places, at least in the Western world, the many animal laws created in the recent modern period seem to have as their main impetus protection of animals for their own sakes. But there appears to be a transformation taking place. A new motive now seems to be developing as a primary purpose of modern legislation—a purpose that folds science into the law.

III. THE MODERN (AND FUTURE?) PERIOD

A. *How Did We Get Here?*

I have somewhat arbitrarily designated the modern period as beginning in 1970. One could quibble with this, marking it perhaps a bit earlier or perhaps a bit later. But this specific demarcation is really unimportant; what is essential is that during our recent history a transformation of animal law and its purposes seems to be taking place. This is not a change that should be surprising and is actually one that we might, in the abstract, have thought would have occurred earlier, perhaps in the late nineteenth century.

I say this because of Charles Darwin and the rapid development of science relating to animals. Darwin revealed the deep biological connections between humans and other animals, and this has been a much-heralded reason to change our relationship with animals ever since.¹⁸⁵ As discussed before, animals through much of at least Western history have been hierarchically categorized, often with religious motivations, with humans, of course, at the top of the hierarchy.¹⁸⁶

¹⁸² See Kelch, *supra* n. 124, at 169–75, 193–202, 209–11 (describing key features of the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes, and several New Zealand animal-welfare codes).

¹⁸³ See *id.* at 202–07, 286–88 (reviewing India’s Prevention of Cruelty to Animals Act of 1960); see generally Maneka Gandhi et al., *Animal Laws of India* (4th ed., Universal L. Publg. Co. 2011) (containing reprints of various Indian animal laws on a range of topics, including anti-cruelty, transport of animals, controlled breeding, and wildlife protection).

¹⁸⁴ Paul, *supra* n. 179, at 26.

¹⁸⁵ Beers, *supra* n. 17, at 29–33.

¹⁸⁶ See Ritvo, *supra* n. 48, at 15–16 (“The animal kingdom, with humanity in a divinely ordained position at its apex, represented, explained, and justified the hierarchical human social order.”); Kelch, *supra* n. 124, at 31–32, 38–40 (referring to the “‘Great Chain of Being,’ a hierarchical structure of nature, advancing from the lowest inani-

This hierarchy was largely overturned by Darwin.¹⁸⁷ He stated that, given evolution, both cognitive and emotional similarities exist between humans and animals.¹⁸⁸ Moreover, differences that do exist in cognitive and emotional capacities in humans and animals are matters of degree, not kind.¹⁸⁹ Darwin's concepts, however, seem to have had little effect on hierarchical thought in his time.¹⁹⁰ The only aspect of Darwin's thought that seemed to penetrate public consciousness was the idea of the "survival of the fittest," which humans then applied to themselves as conquerors of the natural world.¹⁹¹ It is really only in the last fifty years that serious study of the cognitive and other abilities of animals has been undertaken.¹⁹² This science shows how correct Darwin was, and reveals that animals should be studied for their similarities to humans rather than for their differences. It has been found that many animals have considerable cognitive abilities and rich emotional lives.¹⁹³ Quite a large number of animals have the ability to reason, solve problems, employ abstract thought and concepts, and use tools.¹⁹⁴ As an example, bees can distinguish between different human letters and are able to understand the concepts of "same" and "different."¹⁹⁵ What do you suppose a rook, a type of crow, will do if given some stones and a container of water with the water below the level it can reach with its beak? It takes the stones and puts them in the water container until the water level is high enough for it to drink.¹⁹⁶ While it is beyond the scope or purpose of this Article to delve deeply into the details of modern cognitive ethology and other sciences relating to animal behavior, it should be sufficient to note that there are myriad other examples of cognitive abilities in many types of animals far beyond what anyone previously anticipated.

But more than this, it has been discovered that many animals have complex emotional lives, and are subject to the same kind of suffering and despair that humans can experience.¹⁹⁷ Grief, despair, anger, love, embarrassment, compassion, and empathy are some of the emotions that have been found to exist in animals.¹⁹⁸ And it is not just

mate objects, like minerals, through plants that have the gift of life, to animals, then to man and on up to the Prime Mover, God").

¹⁸⁷ Beers, *supra* n. 17, at 30.

¹⁸⁸ *Id.*

¹⁸⁹ Kelch, *supra* n. 124, at 33–72.

¹⁹⁰ Beers, *supra* n. 17, at 30–31.

¹⁹¹ *Id.*

¹⁹² See Kelch, *supra* n. 124, at 38–64 (discussing the science relating to the emotional and cognitive abilities of animals).

¹⁹³ *Id.* at 72.

¹⁹⁴ *Id.* at 40–64.

¹⁹⁵ James L. Gould, *Can Honey Bees Create Cognitive Maps?*, in *The Cognitive Animal* 41, 43–44 (Marc Beckoff et al. eds., Mass. Inst. of Technology Press 2002).

¹⁹⁶ Jeffrey Kluger, *Inside the Minds of Animals*, *Time* 36, 40 (Aug. 16, 2010).

¹⁹⁷ See Kelch, *supra* n. 124, at 50–53, 60–64 (discussing issues relating to animal emotions).

¹⁹⁸ *Id.* at 61.

animal behavior that supports the existence of these emotions in animals; the physiological evidence is also mounting. For instance, “spindle cells,” known to play a role in human emotions and apparently tied to the emotion of empathy, have been found to exist in the same parts of the brains of apes and certain whales as in humans.¹⁹⁹ The emotional building blocks for morality and moral behavior have also been observed in certain animals.²⁰⁰ Again, I could catalog much more new science on emotions in animals, but the point here is that modern science is showing that many animals have rich emotional lives with behavioral and, we are finding, physiological foundations similar to ours.²⁰¹ Since these animals have, to a not inconsiderable degree, the same sorts of emotional lives as humans, they can be injured in the same way that we can.

So how does this science relate to animal law in the modern period? As will be shown in the forthcoming discussion, science relating to animal behavior now appears to be transforming the regulation of use of animals. Regulation of the use of animals is, at least in theory, being placed on a new footing. In the recent modern period, humans finally found it within themselves to begin to protect animals for their own sakes; however, these regulations were based on rather vague moral, ethical, and emotional notions. On feelings of compassion and empathy. On notions of revulsion at cruelty. On the idea of being “humane.” We were protecting animals for their sakes, but the foundations of our analysis of what was good for their “sakes” was based on our feelings about what they were suffering. We might call this anthropomorphism.²⁰²

We can see this kind of thought in the legislative history of the 1970 amendments to the U.S. Laboratory Animal Welfare Act (AWA). It is said that the amendments in this bill show “a continuing commitment by Congress to the ethic of kindness to dumb animals.”²⁰³ Also, “small helpless creatures deserve the care and protections of a strong and enlightened public.”²⁰⁴ It is enlightened humanity, kindness, and compassion that are the seeds of the AWA, and that were the core of the growing realm of animal-protection law enacted in the recent modern period. Recent history, however, portends a change in the foundations of our regulatory milieu. Now the regulation of animal welfare, while still purportedly based on protecting animals for the sake of the

¹⁹⁹ Jessica Pierce, *Mice in the Sink: On the Expression of Empathy in Animals*, 5 *Envtl. Phil.* 75, 83 (2008).

²⁰⁰ Kelch, *supra* n. 124, at 52.

²⁰¹ *See id.* at 40–64 (offering examples of scientific findings of behavioral and physiological similarities between humans and animals).

²⁰² I am not using “anthropomorphism” in a negative way as is typically the case when the term is used. In my view, evolution tells us that anthropomorphism may be very informative about the nature of animal cognitive and emotive capacities. Remember that Darwin (and modern science) inform us that the differences between animals and humans in these capacities are of degree, not kind.

²⁰³ H.R. Rpt. 91-1651 at 1 (Dec. 2, 1970).

²⁰⁴ *Id.*

animals, is motivated not by vague notions of what is humane or ethical, but is grounded in what I refer to as “scientific animal welfare.” Scientific animal welfare is the purported use of animal science as the groundwork for laws relating to the protection of animals. It is the alleged translation of science into law to provide proper “animal welfare” to animals that we use in agriculture, experiments, and entertainment. And I use terms such as “purported,” “alleged,” and the like purposefully since, as we will see, this translation of science into law is not necessarily an accurate translation.

B. *The Example of the European Union*

Numerous instructive examples reveal the use of modern animal science in the formulation of laws relating to animals. Probably the clearest and most explicit use of science in the regulation of animal welfare is represented by recent laws in the European Union (EU) purportedly based on scientific reports on the welfare of animals. Council Directive 2007/43/EC on the protection of chickens kept for meat production is explicitly based on the Report of the Scientific Committee on Animal Health and Animal Welfare, *The Welfare of Chickens Kept for Meat Production*.²⁰⁵ This report contains considerable detail on the needs of chickens kept for meat production and provides numerous recommendations on how chickens should be treated and kept.

It begins by acknowledging that animals used for commercial purposes are “living and sensitive creatures.”²⁰⁶ It goes on to accept the not uncontroversial premise that “animal welfare” can be “scientifically accessed.”²⁰⁷ It defines a concept of “welfare”: “Welfare of an animal is its state as regards its attempts to cope with its environment.”²⁰⁸ This concept includes “pleasurable mental states and unpleasant states such as fear and frustration.”²⁰⁹ Not only does the report define animal “welfare,” it provides the following scientific indicia for assessment of animal welfare: mortality and morbidity, body condition, behavior, and physiology.²¹⁰ Through the use of these measurable criteria, according to the report, the welfare of animals can be scientifically measured.

²⁰⁵ Council Directive 2007/43/EC laying down minimum rules for the protection of chickens kept for meat production, OJ L 182/19–20 (2007) (available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:182:0019:0028:EN:PDF> (accessed Apr. 14, 2013)).

²⁰⁶ European Commn., Rpt. of the Sci. Comm. on Animal Health & Animal Welfare, *The Welfare of Chickens Kept for Meat Production (Broilers)* § 3, Doc. SANCO.B.3/AH/R15/2000 at § 3.1 (Mar. 21, 2000) (available at http://ec.europa.eu/food/fs/sc/scah/out39_en.pdf (accessed Apr. 14, 2013)).

²⁰⁷ *Id.*

²⁰⁸ *Id.*

²⁰⁹ *Id.*

²¹⁰ *Id.* at §§ 3.3–3.3.4.

Given these criteria and the extant scientific evidence, the report makes numerous recommendations on improving the welfare of chickens kept for meat production including the following:

- It recognizes that breeding for growth and feed conversion causes welfare problems due to resultant health problems. It concludes from this that higher priority should be given to health concerns in breeding and that breeding that causes poor welfare should not be permitted.
- Training of personnel is very important in maintaining animal welfare.
- Inspections should be required on a daily basis and regular monitoring schemes should be established.
- Specific recommendations on things such as lighting requirements for chickens are provided. It is, for example, recommended that chickens should have at least two hours of darkness per day (note that chickens feed more in the light, so it is in the interest of the farmer to maintain constant daylight). Temperature levels and requirements for litter and air quality are also the subjects of recommendations.²¹¹

It is on these and other recommendations and conclusions of the report that Council Directive 2007/43/EC professes to be founded. Indeed, this directive does contain provisions addressing many of the recommendations contained in the report, including provisions relating to training of personnel, lighting, ventilation, litter condition, and inspections.²¹²

Similarly, the present law in the EU²¹³ on the protection of pigs purports to be based on the Report of the Scientific Veterinary Committee, *The Welfare of Intensively Kept Pigs*.²¹⁴ This report, created for the EU Commission and Council, was authored by a committee including experts in veterinary medicine, animal husbandry, farm management, and animal health.²¹⁵ The intent of the report is stated as follows: “The report which follows gathers together and presents the current scientific evidence regarding the welfare of pigs in various breeding systems.”²¹⁶ Like the report on chickens kept for meat production, this report is rooted in the belief that scientific measurement of welfare is possible.²¹⁷ In divining this welfare, the report looks at the “state” of the animal, including its “feelings,” physiological func-

²¹¹ *Id.* at § 13.

²¹² Council Directive 2007/43/EC at 182/24.

²¹³ Council Directive 2001/88/EC amending Directive 91/630/EEC laying down minimum standards for the protection of pigs, OJ L 316/1 (2001) (available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2001:316:0001:0004:EN:PDF> (accessed Apr. 14, 2013)).

²¹⁴ European Commn., Rpt. of the Sci. Veterinary Comm., *The Welfare of Intensively Kept Pigs*, Doc. SSIV/B3/ScVC/0005/1997 (Sept. 30, 1997) (available at http://ec.europa.eu/food/fs/sc/oldcomm4/out17_en.pdf (accessed Apr. 14, 2013)) [hereinafter Rpt. on the Welfare of Pigs].

²¹⁵ *Id.* at preface.

²¹⁶ *Id.*

²¹⁷ *Id.* at ch. 1, § 1.2.

tions, and health.²¹⁸ The report discusses methods of measuring animal welfare, including physiological and behavioral factors, injuries, health, growth, reproduction, and life expectancy.²¹⁹ It also discusses various specific scientific methods for measuring these elements of animal welfare,²²⁰ as well as what it refers to as the biological “needs” of animals.²²¹

Husbandry practices as they relate to animal welfare are also the subject of the report, including the use of bedding, flooring types, social structures for the animals, climatic conditions where the animals are kept, noise, crowding, surgical and other procedures performed on animals, and disease prevention.²²² In discussing animal welfare the report also references the “Five Freedoms”:²²³ freedom from hunger and thirst; freedom from discomfort; freedom from pain, injury, and disease; freedom to express normal behavior; and freedom from fear and distress.²²⁴ Notice though, that on the other side of the ledger, the report also considers economic issues and the financial ramifications of animal-welfare regulations.²²⁵ This report, like that on chickens kept for production of meat, makes detailed recommendations on the welfare of pigs based on the scientific and other information collected by the committee.²²⁶ To improve the welfare of pigs it makes a number of specific conclusions and recommendations, including:

- Daily inspections of animals should be required;
- Pigs should not be kept in social isolation;
- Pigs should not be kept in darkness and should have light for approximately eight hours a day;
- Noise levels above eighty-five decibels should be avoided;
- All pigs should be provided space so that they can lie recumbently at the same time;
- Castration should be done with analgesia, and tearing of tissue in these procedures should be avoided;
- Problems of injury by tail biting should be solved by methods other than tail docking;
- Tooth grinding rather than clipping should be done, but owners should try to avoid both;

²¹⁸ *Id.* at ch. 1, § 1.2.

²¹⁹ *Id.* at ch. 1, § 1.5.

²²⁰ Rpt. on the Welfare of Pigs, *supra* n. 214, at ch. 1, §§ 1.6–1.11.

²²¹ *Id.* at ch. 1, § 1.3.

²²² *Id.* at ch 4, §§ 4.1.1–4.7.4.

²²³ *Id.* at ch. 1, § 1.4.

²²⁴ See Pew Commn. on Indus. Farm Animal Prod., *Putting Meat on the Table: Industrial Farm Animal Production in America* 35 (2008) (available at <http://www.ncifap.org/bin/e/j/PCIFAPFin.pdf> (accessed Apr. 14, 2013)) [hereinafter Pew Rpt.] (describing the origin of the “Five Freedoms” as an international baseline for animal welfare).

²²⁵ Rpt. on the Welfare of Pigs, *supra* n. 214, at ch. 6.

²²⁶ *Id.* at ch. 8.

- Persons in charge of pigs should be licensed and certified after proper training; and
- Sows should not be confined throughout gestation.²²⁷

These recommendations have found their places in a number of EU directives relating to the treatment of pigs in agriculture. Council Directive 2001/88/EC, as one example, includes provisions providing space requirements for pigs, prohibiting tethering of sows and gilts, and requiring training of personnel.²²⁸ In addition, Commission Directive 2001/93/EC addresses other issues covered by the report relating to tail docking, tooth clipping, tooth grinding, and castration.²²⁹

These are not the only EU reports relating to animal-welfare issues. There is also, for instance, a report on *The Welfare of Animals during Transport*, which is similar to the other reports in using science to make recommendations on animal welfare, in this case in the context of transport.²³⁰ This report was used in recent changes in EU law on the transportation of animals.²³¹

What can we derive from these reports? Perhaps the most obvious inference is that there is an underlying assumption that animals will continue to be used in agriculture in the same ways that they are used at present—they will continue to be raised for human food. In other words, there is no discussion of the possibility that modern science might lead us to conclude that some or all uses of animals in agriculture should be abolished. From what we know scientifically about the characteristics of animals, however, this question seems a quite legitimate one that needs to be answered. But it is not.

Instead, what we are given are recommendations focused on improving the lot of animals in agriculture by providing an environment more in line with their natural behaviors. We provide more space, supposedly more natural lighting and sound levels, and some social interaction so that the animals have a more natural environment on their way to eventual slaughter. Inspections and training are also empha-

²²⁷ *Id.* at ch. 8, §§ 2, 15, 25, 31, 34, 38, 40, 42, 44, 73.

²²⁸ Council Directive 2001/88/EC amending Directive 91/630/EEC laying down minimum standards for the protection of pigs, OJ L 316/1–3 (2001) (available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2001:316:0001:0004:EN:PDF> (accessed Apr. 14, 2013)); *see also* Council Directive 2008/120/EC laying down minimum standards for the protection of pigs (codified version), OJ L 47/5–10 (2008) (available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:047:0005:0013:EN:PDF> (accessed Apr. 14, 2013)) (codifying Council Directive 91/630/EEC and its subsequent amendments).

²²⁹ Commission Directive 2001/93/EC amending Directive 91/630/EEC laying down minimum standards for the protection of pigs, OJ L 316/36–37 (2001) (available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2001:316:0036:0038:EN:PDF> (accessed Apr. 14, 2013)).

²³⁰ European Commn., Rpt. of the Sci. Comm. on Animal Health and Animal Welfare, *The Welfare of Animals during Transport* 6–7, 95 (2002).

²³¹ Council Regulation 1/2005 on the protection of animals during transport and related operations, OJ L 3/2 (2005) (available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:003:0001:0044:EN:PDF> (accessed Apr. 14, 2013)).

sized because animal-welfare concerns are not likely to be addressed if not observed and analyzed by knowledgeable people. So the recommendations relate to procedural, technical, and engineering problems, not ultimate questions about the ethics or morality of use of animals in agriculture.

A focus on technical and engineering issues in animal law is not unusual. In an analysis of animal-ethics committees used in Sweden to approve animal experiments, it was found that committee members, since they cannot come to consensus on ultimate issues such as whether animal experiments are scientifically efficacious or morally justifiable, spend the bulk of their time considering technical and engineering issues—that is, issues on which consensus is possible.²³² So decision-making bodies of various stripes, legislative and otherwise, have a tendency to gravitate toward the path of least resistance, thereby dodging the fundamental and crucial question of whether animals should be used for agricultural or other purposes at all.

It is not only the EU that uses the science of animal welfare to inform its regulations. Similar linkages between regulation and animal-welfare science can be seen in the *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes (Australian Code)*.²³³ Technically, the *Australian Code* is not a law, but a document produced through the efforts and resources of governmental and non-governmental entities, including animal-welfare groups.²³⁴ It is nonetheless the primary tool regulating the use of animals in experiments in Australia, and has been incorporated in the law of most Australian states in one way or another.²³⁵ The *Australian Code* provides that animal welfare must be a “primary consideration” in regulating animal experimentation, and is to be “based on behavioral and biological needs.”²³⁶ Housing and transportation of animals, as well as other matters, are required to meet “species-specific needs.”²³⁷ For instance, “[t]he design and management of animal accommodation should meet species-specific needs.”²³⁸ In all this it must be understood that “spe-

²³² See Kelch, *supra* n. 124, at 182–83 (detailing comments and questions from a number of committee members that indicate little, if any, concern for coming to a consensus on the ethics of animal experiments).

²³³ Commonwealth, *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes*, Natl. Health and Medical Research Council (7th ed. 2004) 1, 5 (available at http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/ea16.pdf (accessed Apr. 14, 2013)) [hereinafter *Australian Code*].

²³⁴ *Id.* at 1; see also New South Wales Dept. of Primary Indus., *The Australian Code of Practice for the Care and Use of Animals for Scientific Purposes (Factsheet 8)*, <http://www.dpi.nsw.gov.au/agriculture/livestock/animal-welfare/research-teaching/factsheets/awfact08> (2005) (accessed Apr. 14, 2013) (stating that the *Australian Code* is a nationally recognized source for guidelines pertaining to animal research and has been incorporated by reference into regulation).

²³⁵ Kelch, *supra* n. 124, at 174–75.

²³⁶ *Australian Code*, *supra* n. 233, at § 1.16.

²³⁷ *Id.*

²³⁸ *Id.* at § 1.15.

cies-specific needs” can only be determined by some scientific measure.²³⁹ Furthermore, it states that “[a]nimals must be suitable for the scientific purpose taking into account their biological characteristics including behaviour, genetic attributes and nutritional, microbiological and general health status.”²⁴⁰ Here there is explicit reliance on biological science.

So we see that scientific animal welfare has become a foundation of the regulation of uses of animals in the EU and elsewhere. But is it also occurring in the present anti-science atmosphere of the U.S.?

C. “Science” in the U.S.?

Given the considerable anti-science sentiment in the U.S. at this point in our history, one might wonder whether there is much likelihood at all that science would form the foundation of any law in this country.²⁴¹ One need only consider that just 14% of the population in the U.S. believes evolution is “definitely true” to see how profound the ignorance and distrust of science is in this country.²⁴²

Of course, evolution is controversial for religious reasons, so perhaps bringing the science relating to animal welfare into policy discussions would fare better in the U.S. than evolutionary science. It can be cogently argued that the U.S. now falls rather far down the list of countries on animal-protection law.²⁴³ This is not to say that nothing has been produced in the U.S. that could be a foundation for science-based revision of animal-welfare laws. What is typically called the Pew Report, which discusses the use of agricultural animals, is a charitably funded report based in part on scientific and technical analysis of the biological needs of animals.²⁴⁴ Unlike the EU reports, it is not commissioned by the government. Like the EU scientific report on the welfare of pigs, the Pew Report describes the “Five Freedoms,” which it further identifies as “ideal states”—rather than “acceptable welfare” stan-

²³⁹ Margaret Rose & Elizabeth Grant, Lecture, *Australia’s Ethical Framework for Animals Used in Research and Teaching* (Gold Coast, Queensland 2008) (available at http://www.daff.gov.au/_data/assets/pdf_file/0020/1046351/04-margaret-rose.pdf (accessed Apr. 14, 2013)).

²⁴⁰ *Australian Code*, *supra* n. 233, at § 1.14.

²⁴¹ See e.g. James Owen, Natl. Geographic News, *Evolution Less Accepted in U.S. Than Other Western Countries, Study Finds*, <http://news.nationalgeographic.com/news/2006/08/060810-evolution.html> (Aug. 10, 2006) (accessed Apr. 14, 2013) (identifying fundamentalist religious beliefs, conservative political views, and a lack of biological knowledge as three reasons that U.S. residents are less likely to accept evolution than their European counterparts).

²⁴² *Id.*

²⁴³ See Stephanie J. Engelsman, “World Leader”—At What Price? A Look at Lagging American Animal Protection Laws, 22 *Pace Env’tl. L. Rev.* 329, 331, 368–69 (2005) (arguing that animal-protection legislation in the U.S. is ineffective and lags far behind the laws of many European nations).

²⁴⁴ See generally Pew Rpt., *supra* n. 224 (investigating the current problems associated with animal production in the industrial-farm context and providing recommendations).

dards.²⁴⁵ This is telling. We see here a distinction between what are “ideal” standards for the proper treatment of animals, and “animal-welfare” standards, which are those that are actually applied in the context of the use of animals in agriculture and elsewhere. This appears to admit that standards propounded for the purposes of animal welfare are often quite different from what would be natural or ideal conditions for animals.

Like the EU reports, the Pew Report also contains recommendations. It recommends that federal standards be created requiring what it calls “Good Feeding,” “Good Housing,” “Good Health,” and “Appropriate Behavior” for agricultural animals.²⁴⁶ These requirements are actually the EU refinement of the “Five Freedoms.”²⁴⁷ Although the freedom from fear is not specifically stated in this formulation, the Appropriate Behavior requirement does state that fear, distress, and similar feelings should be avoided.²⁴⁸ More specifically, the report recommends that agricultural practices such as gestation and farrowing crates for sows, tail docking of cattle, foie gras production, battery cages, and forced molting of hens should be phased out.²⁴⁹ The Pew Report also advocates a government-oversight system in agriculture similar to what exists for animal experimentation.²⁵⁰ And directly to the point of science, the report recommends improvements in animal welfare as a science.²⁵¹ To the same end, it urges federal funding of animal-welfare research so that there is truly objective research in this area, not just research performed by interested parties like the agriculture industry.²⁵² But the Pew Report does not just recommend more and better science; it specifically calls for consideration of ethics in connection with this scientific research.²⁵³

Unlike the EU reports, the Pew Report has not yet been successfully utilized to reach its stated goals such as obtaining federal standards for the treatment of agricultural animals.²⁵⁴ While we will see that it has at least been referred to in connection with California’s Proposition 2 animal-agriculture reforms, it is not clear that this report will result in changes in the law as has occurred in the EU based on

²⁴⁵ *Id.* at 35, 37 (further stating that these Five Freedoms have been refined by the EU and supplying a chart showing this refinement).

²⁴⁶ *Id.* at 83.

²⁴⁷ *Id.* at 35–37.

²⁴⁸ *Id.*

²⁴⁹ *Id.* at 85.

²⁵⁰ Pew Rpt., *supra* n. 224, at 83.

²⁵¹ *Id.*

²⁵² *Id.* at 87.

²⁵³ *Id.*

²⁵⁴ Tadlock Cowan, Cong. Research Serv., *Humane Treatment of Farm Animals: Overview and Issues*, summary-6 (2011), (available at <http://www.nationalaglawcenter.org/assets/crs/RS21978.pdf> (accessed Apr. 14, 2013)) (stating that there has been no action taken on “various bills that would affect animal care on the farm, during transport, or at slaughter” and that none were introduced in the 112th Congress).

similar reports.²⁵⁵ The present political climate in the U.S. does not portend well for federal animal-law reforms. The power of corporate agricultural and pharmaceutical giants over federal elected representatives leaves little room for progress on these issues.²⁵⁶ This can be seen as the reason that battles on animal-protection legislation have now largely fallen to the states, principally in the form of state ballot propositions to change agricultural-animal treatment.²⁵⁷

An example of this citizen-driven reform is California's Proposition 2, which specifies space requirements necessary for proper welfare of agricultural animals. It is intended to prevent the close confinement of agricultural animals and was passed with more votes than any other citizen initiative in state history, garnering over eight million votes.²⁵⁸ The main provision of this law, all of which is now a part of the California Health and Safety Code, states: "In addition to other applicable provisions of law, a person shall not tether or confine any covered animal, on a farm, for all or the majority of any day, in a manner that prevents such animal from: (a) [l]ying down, standing up, and fully extending his or her limbs; and (b) [t]urning around freely."²⁵⁹ This is the crux of it—a law that gives a little bit of space to animals in agriculture, enough to lie down, extend limbs, and turn around. Not much to ask, I suppose.

The purposes of this law cannot be denied to have been for the protection of animals. For instance, the Humane Society of the United States (HSUS) argued in favor of the proposition on grounds largely focused on animal-cruelty aspects of present practices.²⁶⁰ Advertisements supporting the proposition and other materials distributed relating to it reveal the animal-welfare foundation of the law.²⁶¹ But do

²⁵⁵ *Infra* n. 263.

²⁵⁶ Russ Choma, Ctr. For Responsive Politics, Open Secrets Blog, *Pharma, Utilities and Big Ag Lead Lobbying in 2012*, <http://www.opensecrets.org/news/2012/04/pharma-utilities-and-big-ag-lead-lo.html> (Apr. 27, 2012) (accessed Apr. 14, 2013) (stating that pharmaceutical companies and big agriculture were among the top lobbying organizations in 2012).

²⁵⁷ See Humane Socy. of the U.S., *Initiative and Referendum History—Animal Protection Issues* (available at http://www.humanesociety.org/assets/pdfs/legislation/ballot_initiatives_chart.pdf (accessed Apr. 14, 2013)) (providing a list of animal-protection ballot measures proposed since 1990).

²⁵⁸ Tracie Cone, UT San Diego, *Calif Lawmakers Rally Around Animal Welfare Issues*, <http://www.utsandiego.com/news/2009/may/29/ca-animal-welfare-052909/> (May 29, 2009) (accessed Apr. 14, 2013); see also Jonathan R. Lovvorn & Nancy V. Perry, *California Proposition 2: A Watershed for Animal Law*, 15 *Animal L.* 149, 167 (2008) (stating that 8.2 million people voted for Proposition 2).

²⁵⁹ Cal. Health & Safety Code § 25990 (2008).

²⁶⁰ Jesse McKinley, *A California Ballot Measure Offers Rights for Farm Animals*, *N.Y. Times* A12 (Oct. 24, 2008).

²⁶¹ See e.g. Betsy Rosenfeld, YouTube, *CGS.ORG - California Prop. 2 - Proponent Interview* at 0:27 to 0:47 (centgov posted Oct. 20, 2008) (available at <http://youtu.be/HqFpoDLE2oQ> (accessed Apr. 14, 2013)); HumaneCalifornia, YouTube, *YES! On Prop 2 video: "California Factory Farmer,"* at 0:00 to 0:32 (HumaneCalifornia posted Oct. 24, 2008) (available at <http://youtu.be/B-nIAIff48Y> (accessed Apr. 14, 2013)); Dr. Jeff Smith, YouTube, *Prop 2 TV Commercial (2)*, at 0:00 to 0:31 (HumaneCalifornia posted Oct. 7,

we see science or the Pew Report being used here to support the law? Most of the arguments made are in the form that I referred to as being the lynchpin of the recent modern period—rather vague statements of compassion about the treatment of animals. There is, however, some reference to the Pew Report in connection with the proposition. The reforms in Proposition 2 have been referred to in several sources as being of the kind the Pew Commission favored.²⁶²

In the California Legislature, there was concern that this proposition would harm California farmers and that agricultural products, like eggs, would simply be brought into California from states without regulations of this kind.²⁶³ To address this issue, the California Legislature added California Health and Safety Code sections 25995 through 25997 in 2011.²⁶⁴ This law follows Proposition 2, and is intended to both carry out its mandate and protect California farmers. It specifically provides that shelled eggs sold in California must comply with California law relating to the animal-care standards of the state of California—including Proposition 2.²⁶⁵ In addition, these provisions state explicitly that the Pew Report influenced the legislation: “According to the Pew Commission . . . food animals that are treated well and provided with at least minimum accommodation of their natural behaviors and physical needs are healthier and safer for human consumption.”²⁶⁶ Section 22995(e) further describes purposes of the law related to the protection of human health: “It is the intent of the Legislature to protect California consumers from the deleterious, health, safety, and welfare effects of the sale and consumption of eggs derived from egg-laying hens that are exposed to significant stress and may result in increased exposure to disease pathogens including salmo-

2008) (available at <http://youtu.be/7SJNU6icdJs> (accessed Apr. 14, 2013)); Wayne Pacelle, YouTube, *YES! On Prop 2 TV Commercial: “Cruelty and Fraud,”* at 0:00 to 0:31 (HumaneCalifornia posted Oct. 23, 2008) (available at <http://youtu.be/Jd9NOKueKaU> (accessed Apr. 14, 2013)); Hope Bolhenick, YouTube, *5 Reasons to Vote Yes on Proposition 2* at 0:00 to 4:27 (Brad Larsen posted Sept. 5, 2008) (available at <http://youtu.be/pZmGZ4NIKJ0> (accessed Apr. 14, 2013)); Jennifer Fearing, YouTube, *Why I am Voting Yes on Prop 2* at 0:00 to 1:57 (HumaneCalifornia posted Sept. 17, 2008) (available at <http://youtu.be/RUYhKGifO5A> (accessed Apr. 14, 2013)); Wayne Pacelle, YouTube, *YES! on Prop 2 TV Commercial: “Better Now”* at 0:00 to 0:31 (HumaneCalifornia posted Oct. 15, 2008) (available at <http://youtu.be/JMyqvEhpL5c> (accessed Apr. 14, 2013)); HumaneCalifornia, YouTube, *Uncaged-Yes on Prop 2* at 0:00 to 1:53 (HumaneCalifornia posted Sep 24, 2008) (available at <http://youtu.be/oqPJsfjyZU> (accessed Apr. 14, 2013)) (providing examples of such ads).

²⁶² Lovvorn & Perry, *supra* n. 258, at 168; FarmForward, *Yes! On Prop 2*, <http://www.farmforward.com/features/yes-on-prop-2> (accessed Apr. 14, 2013) (stating that Proposition 2 is consistent with the recommendations of the Pew Commission Report).

²⁶³ Humanewatch, *Will HSUS’s Egg Agenda Scramble the U.S. Constitution?*, http://humanewatch.org/index.php/site/post/scramble_the_constitution/ (July 26, 2010) (accessed Apr. 14, 2013).

²⁶⁴ *Id.*

²⁶⁵ Cal. Health & Safety Code § 25996 (2011).

²⁶⁶ *Id.* at § 25995(a).

nella.”²⁶⁷ So, interestingly, this law is not about animal welfare so much as human welfare. Of course, this is a law relating to the import of eggs into the state and not technically about animal issues, so one can perhaps excuse the focus on protecting humans from eggs produced in what may be unhealthy conditions.

While the Pew Report and the science of animal welfare do not seem to have been a major focus of Proposition 2 itself, the policy discussions relating to the foie gras ban enacted by the California Legislature did involve scientific principles. This law banned the practice of force feeding birds and the sale of products resulting from the force feeding of birds. This law, according to its legislative history, was explicitly based on scientific notions of animal welfare.²⁶⁸ The legislative history of the law cites the EU Scientific Committee on Animal Health and Animal Welfare, which states that:

[force feeding birds is] detrimental to the welfare of the birds. Further, it was found that the force feeding of ducks and geese. . .causes physical problems, including respiratory, metabolic, and locomotive impairment. Foie gras production also prevents birds from engaging in their natural exploratory activities and social behaviors, leading to depression and frustration, while the force feeding process creates very high stress levels for the birds. They also found that elevated death rates was another indication of welfare problems associated with foie gras production.²⁶⁹

As a contrast, neither science nor compassion seemed in the end to mean much in a foie gras ban in Chicago. A Chicago ordinance was passed prohibiting foie gras and then subsequently repealed, without debate, with Mayor Richard Daley stating that it was the “silliest law” the council had ever passed.²⁷⁰

So in the U.S. it seems the present battle on animal-treatment issues is being largely fought at the state level. While the translation of science into animal law does not seem to be occurring here in quite the same way as in the EU and other Western countries, there is nonetheless some movement away from vague arguments founded on notions of compassion and humanity towards viewing science as a basis for protecting animals. With the injection of the Pew Report and EU reports into the mix, we may see more focus on science in future efforts at animal-law reform in the U.S.

D. Campaigns, Academics, Industry, and the Future

Particularly in Europe, but elsewhere as well, we observe science emerging as a crucial tool and motivating force in constructing legisla-

²⁶⁷ *Id.* at § 25995(e).

²⁶⁸ Cal. Sen. Comm. on Business and Professions, *Hearing on S.B. 1520*, 2012 Reg. Sess 4–7 (June 22, 2004).

²⁶⁹ *Id.* at 4.

²⁷⁰ Joshua I. Grant, *Hell to the Sound of Trumpets: Why Chicago’s Ban on Foie Gras was Constitutional and What It Means for the Future of Animal Welfare Laws*, 2 *Stan. J. Animal L. & Pol’y* 52, 70 (2009).

tion calling for improved treatment of animals in agriculture. The connection between science and animal law is becoming much more expansive than this, though. Since scientific arguments have infiltrated debates over legislation, it is not surprising that those leading campaigns for improved animal welfare and animal rights grasp hold of science as a device to further their arguments and goals.

An example of this is the Great Ape Project. The purpose of this project “is to guarantee the basic rights to life, freedom and non-torture of the non-human great apes—Chimpanzees, Gorillas, Orangutans[,] and Bonobos, our closest relatives in the animal kingdom.”²⁷¹ This project was founded by Peter Singer and Paola Cavalieri, and since both are philosophers, it is not surprising that they would have moral reasons for spearheading this effort.²⁷² But it is not just abstract arguments that fuel the project; there is considerable science underpinning this movement. The scientific foundation of the Great Ape Project is described by Peter Singer as follows:

The work of researchers like Jane Goodall, Diane Fossey, Birute Galdikas, Frans de Waal, and many others amply demonstrates that the great apes are intelligent beings with strong emotions that in many ways resemble our own.

Chimpanzees, bonobos, and gorillas have long-term relationships, not only between mothers and children, but also between unrelated apes. When a loved one dies, they grieve for a long time. They can solve complex puzzles that stump most two-year-old humans. They can learn hundreds of signs, and put them together in sentences that obey grammatical rules. They display a sense of justice, resenting others who do not reciprocate a favor.²⁷³

Moreover, one must consider the similarities between great apes and humans as revealed by DNA and blood: “From the biological point of view, between two human beings there can be a difference of 0,5% in the DNA. Between a man and a chimpanzee this difference is only 1,23%. This similarity is proved, for instance, from the fact that chimpanzees can donate blood to humans, and vice-versa.”²⁷⁴ So this campaign to grant rights to apes, like modern legislative efforts to protect animals, has seized the saber of science to support transformations in our legal relationship with animals.

Other campaigns for the improvement of the lot of animals are using modern science in pressing their agenda. Animal Defenders International (ADI) is pressing for a British ban on the use of animals in circuses, except where there is a license granted by the Secretary of State, and their campaign is strongly supported by a detailed scientific

²⁷¹ Great Ape Project, *History*, <http://www.greatapeproject.org/en-US/oprojetogap/Historia> (accessed Apr. 13, 2014).

²⁷² *Id.*

²⁷³ Peter Singer, *The Great Ape Debate*, <http://www.utilitarian.net/singer/by/200605-.htm> (May 2006) (accessed Apr. 14, 2013).

²⁷⁴ Great Ape Project, *Mission and Vision*, <http://www.greatapeproject.org/en-US/oprojetogap/Missao> (accessed Apr. 14, 2013).

report on the welfare of animals in circuses.²⁷⁵ In considering an issue we have seen before, the ADI Report describes “animal welfare” based on a definition in *Webster’s Dictionary* as the “capacity to avoid suffering and sustain fitness” and includes giving the animal some control over its environment.²⁷⁶ Like other scientific reports, this one identifies certain indicators of welfare including psychological cues such as elevated heart rate or cortisol levels, stereotypic behaviors, and stress.²⁷⁷

The study goes on to describe scientific evidence on the transport and captivity of animals, showing that animal welfare is compromised in circuses—for both domestic and wild animals. Under the standards of animal welfare used in the ADI Report, the traveling circus does not constitute a proper environment for animals for a number of reasons:

The travelling circus is not a suitable environment for an animal, because restrictions of space, time, mobility of equipment and facilities mean that no animal will be able to behave as it would in its natural environment. Many of the species commonly kept in circuses have highly specialised behavior, making it impossible to cater for them in the circus.²⁷⁸

One of the problems noted is that long periods of transportation are the norm in circuses.²⁷⁹ The report provides specific evidence from several studies revealing stress and disease problems for horses in transport.²⁸⁰ Other evils associated with the transport of animals are identified as aggression, immune system problems, weight loss, and increased plasma cortisol concentrations.²⁸¹ The ADI Report presents similar research on transportation of a number of exotic species.²⁸²

Another set of issues with circuses is identified as husbandry and close confinement of animals. Here, the report discusses scientific studies on the effect of close confinement in structures, the chaining of elephants, and the stereotypic behavior that arises out of this chaining and restriction of movement.²⁸³ A number of animals exhibit stereotypic behaviors due to confinement in circuses, including elephants, cheetahs, zebras, and horses, and these behaviors are discussed in

²⁷⁵ Animal Defenders Intl., *Animals in Travelling Circuses: The Science on Suffering*, [http://www.ad-international.org/admin/downloads/circuses_science_awb_lords_\(low_res\).pdf](http://www.ad-international.org/admin/downloads/circuses_science_awb_lords_(low_res).pdf) (2006) (accessed Apr. 14, 2013) [hereinafter ADI Rpt.]; Captive Animals Protec. Socy., *Animal Circuses, Animal Suffering*, <http://www.captiveanimals.org/news/2010/06/animal-circuses-animal-suffering> (June 3, 2010) (accessed Apr. 14, 2013) (reporting a University of Bristol study that shows that circuses “fail to provide some of the most basic welfare needs of wild animals, such as space and social groups”).

²⁷⁶ ADI Rpt., *supra* n. 275, at 4.

²⁷⁷ *Id.* at 4–5.

²⁷⁸ *Id.* at 5.

²⁷⁹ *Id.* at 5–6.

²⁸⁰ *Id.* at 6–7.

²⁸¹ *Id.* at 7.

²⁸² ADI Rpt., *supra* n. 275, at 6–10.

²⁸³ *Id.* at 12.

some detail.²⁸⁴ Scientific studies on inappropriate social groupings and isolation are also considered.²⁸⁵ In particular, the report looks at the effects of grouping different species together and the impact of close proximity of predators to prey animals,²⁸⁶ something that is not unusual in circuses.

The ADI Report establishes scientifically that animals are indeed suffering as a consequence of the many problems inherent in circuses.²⁸⁷ As a result, the report sums up its findings by stating that “travelling circuses cannot adequately provide for the basic welfare and environmental needs of the animals in their care.”²⁸⁸ The report ultimately concludes, not unexpectedly, that the scientific evidence shows that animal suffering is endemic in circuses, and that this is true for both domestic and wild species.²⁸⁹

It is not just among animal-advocacy organizations that science seems to be coming to the fore in the debate over treatment of animals; academia has joined the battle as well and a new science of animal welfare is developing.²⁹⁰ Journals are being created dedicated to the science of animal welfare. For example, the *Journal of Applied Animal Welfare* describes itself in this way:

The Journal of Applied Animal Welfare Science is the leading peer-reviewed journal on the science of animal welfare for veterinarians, scientists and public policy makers. It presents articles and reports on practices that demonstrably enhance the welfare of wildlife, companion animals and animals used in research, agriculture and zoos. Forthcoming topics include forced molting in chickens, noise in animal shelters and the head-neck position of Dressage horses. JAAWS, which began in 1998, is published by the academic press, Taylor and Francis, and is a joint project of ASI and The American Society for the Prevention of Cruelty to Animals.²⁹¹

The journal is presently accepting submissions on a number of topics, including: “describing and measuring the well-being of an animal,” “animal consciousness,” “engineering versus performance criteria of welfare in laboratory animals,” “biogenetic engineering,” “species reintroduction,” “animal companions,” “overpopulation,” “the effect and limits of field studies on welfare,” “feral cat management,” and “welfare issues associated with trapping.”²⁹² This is not the only journal on this subject. There is also the British *Animal Welfare Jour-*

²⁸⁴ *Id.* at 9–18.

²⁸⁵ *Id.* at 18–20.

²⁸⁶ *Id.* at 19–20.

²⁸⁷ *Id.* at 20–24.

²⁸⁸ ADI Rpt., *supra* n. 275, at 24 (emphasis omitted).

²⁸⁹ *Id.* at 4.

²⁹⁰ See A.K. Johnson, *ASAS Centennial Paper: Farm Animal Welfare Science in the United States*, 87 *J. Animal Sci.* 2175, 2176–77 (2009) (noting eleven American universities employing farm-animal-welfare scientists).

²⁹¹ *Journal of Applied Animal Welfare Science*, <http://www.animalsandsociety.org/pages/journal-of-applied-animal-welfare-science> (accessed Apr. 14, 2013).

²⁹² *Id.*

nal, which states that it “publishes the results of peer-reviewed scientific research, technical studies[,] and reviews relating to the welfare of kept animals ([e.g.,] on farms, in laboratories, zoos and as companions) and of those in the wild whose welfare is compromised by human activities.”²⁹³

Researchers are not stopping at the gates of pure science in their work, however; a number of articles relating to animal welfare also include recommendations, some of which might be considered radical. For instance, some scientists working on dolphin intelligence argue that, given what is known about the cognitive and other abilities of dolphins, they should be treated as persons by the law.²⁹⁴ This conclusion is drawn from the fact that dolphins are the second most intelligent animal,²⁹⁵ are smarter than chimps,²⁹⁶ have key brain features indicative of high intelligence,²⁹⁷ and should thus be treated as nonhuman persons. Thomas White, professor of ethics at Loyola Marymount University, Los Angeles, has said in this regard: “The scientific research . . . suggests that dolphins are ‘non-human persons’ who qualify for moral standing as individuals.”²⁹⁸ So here we see scientists and their colleagues doing something much more than scientific research; they are actually using scientific results to make ethical arguments that call for changes in the legal treatment of certain animals.

It is not just animal activists and academics that are now arming themselves with science in promoting their positions and proposed legislation. The industries that use animals have boarded the ark of science in an effort to promote their own interests. On a leading swine-industry website, *The Pig Site*,²⁹⁹ we see the following description of “animal welfare science” by Tina Widowski:³⁰⁰

Animal welfare science has become a well-established field of study over the last thirty years, but it is unique compared to other disciplines in animal science. Unlike areas of study such as genetics or reproductive physiology, the term ‘animal welfare’ does not describe a scientific concept per se but arose in response to ethical concerns about the quality of life that

²⁹³ *Animal Welfare Journal*, <http://www.ufaw.org.uk/animal.php> (accessed Apr. 14, 2013).

²⁹⁴ Jonathan Leake, *Scientists Say Dolphins Should Be Treated as “Non-Human Persons,”* *The Sunday Times*, http://www.thesundaytimes.co.uk/sto/news/uk_news/article194197.ece ¶ 20 (Jan. 3, 2010) (accessed Apr. 14, 2013).

²⁹⁵ *Id.* at ¶ 6.

²⁹⁶ *Id.*

²⁹⁷ *Id.* at ¶ 18.

²⁹⁸ *Id.* at ¶ 21.

²⁹⁹ 5m Publishing, *The Pig Site*, <http://www.thepigsite.com/> (2012) (accessed Apr. 14, 2013).

³⁰⁰ Tina M. Widowski, Paper Presentation, *The Science Behind the Issues in Animal Welfare* (Banff Pork Seminar, Banff, Canada, Jan. 20–23, 2009) (available at <http://www.thepigsite.com/articles/2862A/the-science-behind-the-issues-in-animal-welfare> (accessed Apr. 14, 2013)).

animals experience [citation omitted]. The science of animal welfare allows application of the scientific method to address those concerns.³⁰¹

Once again scientists are concerned about what “animal welfare” is and how to measure it. Widowski identifies three overlapping indicia that can be used to measure welfare.³⁰² First is “biological functioning,” which requires the following: “[T]hat animals should be kept in conditions in which they are healthy, growing[,] and reproducing well and in which they show few physiological or behavioural disruptions. This viewpoint covers many of the basic provisions such as food, water, comfortable temperatures, good air quality, sufficient space[,] and health care.”³⁰³ The second criteria is “feeling well,” which means “that animals should be housed and handled in ways that prevent negative feelings such as pain, fear[,] and frustration and that may even promote positive feelings such as pleasure or contentment.”³⁰⁴ The third is “natural living,” described as “[a] final viewpoint concerning welfare . . . that animals should be able to lead relatively natural lives or behave in ways that are consistent with the nature of their species,”³⁰⁵ and which is claimed to be more difficult to measure than “biological functioning” or “feeling well.”³⁰⁶

It is not just industry websites that discuss animal-welfare issues from a scientific perspective; there are symposia and other industry get-togethers discussing the science of animal welfare. The dialogue at these events often revolves around setting “scientifically based” guidelines for animal welfare in animal-use industries.³⁰⁷ Whether these guidelines are of any utility is another issue. In a paper analyzing, among other things, space requirements for hens presented at the 2000 Poultry Symposium and Egg Processing Workshop at the University of California at Davis, J. A. Mench and J. C. Swanson state:

³⁰¹ *Id.*

³⁰² *Id.* (citing D. Fraser et al., *A Scientific Conception of Animal Welfare That Reflects Ethical Concerns*, 6 *Animal Welfare* 187 (1997)).

³⁰³ *Id.*

³⁰⁴ *Id.*

³⁰⁵ *Id.*

³⁰⁶ Widowski, *supra* n. 300.

³⁰⁷ See e.g. Gilly Griffin et al., *The ICLAS/CACC International Symposium on Regulatory Testing and Animal Welfare: Introduction and Overview*, 43(S) *ILAR Journal* S1 (2002) (available at http://dels-old.nas.edu/ilar_n/ilarjournal/43_supp/V43suppGriffin.shtml (accessed Apr. 14, 2013)) (discussing a symposium, organized by the International Council for Laboratory Animal Science, and observing that “[t]he evidence for the unequivocal link between good animal welfare and quality science is highlighted throughout these [p]roceedings”); Off. of Laboratory Animal Welfare, Symposium, *Proceedings of the Symposium on Animal Welfare and Scientific Research: 1985 to 2010*, 52(S) *ILAR Journal* 417 (2011) (available at <http://grants.nih.gov/grants/olaw/seminar/index.html> (accessed Apr. 14, 2013)) (summarizing a symposium focusing on developments in laboratory-animal-welfare science over the last twenty-five years, as well as scientific developments, resources, and standards to improve the welfare of laboratory animals).

Many of the animal industry groups have guidelines, but they vary from one industry to another both in the approach taken and the amount of detail provided. Some industry guidelines consist of simple statements about the necessity for humane treatment of animals, while others (like those produced by the national Pork Producers Council and the United Egg Producers) lay out detailed specifications for husbandry practices, transport, and/or slaughter.³⁰⁸

Mench and Swanson go on to discuss the ever-present issue in the science of animal welfare: what types of measures of welfare should be used. They identify four measures that they assert are generally used:³⁰⁹ physiological indicators, such as an increased heart rate; health problems and mortality; decreased productivity; and abnormal behaviors, “like pacing, feather pecking and cannibalism, and hysteria.”³¹⁰ While these indicia are not light years from what we have seen described as “animal welfare” in non-industry analyses of these issues, one fascinating difference is the addition of “productivity” as a criteria of welfare.³¹¹ This surely would satisfy industry financial representatives; productivity is their bottom line. But while productivity may be an industry interest, it can surely be argued that it is not a measure of welfare. As a slave, I might be whipped enough to be more productive than might be the case if left to my own devices, but this does not mean that my welfare is improved due to being whipped.

It is also informative to consider the specific analyses of Mench and Swanson concerning space requirements for hens. Here they look at two types of studies: hen preferences in terms of space, measured, for example, by hen choices of large or small cages, and production results in different stocking densities.³¹² In this analysis, substantial time is spent discussing studies on the production effects of different stocking densities.³¹³ Mench and Swanson find that increased density is “associated with increased mortality and decreased housed egg production, both indications of reduced welfare.”³¹⁴ So even at industry

³⁰⁸ J. A. Mench & J. C. Swanson, *Developing Science-Based Animal Welfare Guidelines* 1–6, 1 (available at <http://animalscience.ucdavis.edu/avian/mench.pdf> (accessed Apr. 14, 2013)).

³⁰⁹ *Id.* at 1–2; see also Daniel M. Weary & David Fraser, *Scientific Methods of Assessing Animal Well-Being*, 28 *Scientists Ctr. for Animal Welfare Newsltr.* 9–13 (2006) (available at <http://www.scaw.com/assets/files/1/files/newsletters/06-summer-newsletter-.pdf> (accessed Apr. 14, 2013)) (analyzing three ways to define animal welfare: traditional, which emphasizes biological functions of animals—growth, health and productivity—and is not concerned with living conditions; natural living, in which natural conditions should be provided to animals and they should be able to express natural behavior; and affective states, which focuses on feelings and emotions including pain. According to Weary, these different views can lead to different conclusions but, nonetheless, often coincide. Note also that productivity is used as a welfare measure here as in Mench and Swanson.); Johnson, *supra* n. 290, at 2175.

³¹⁰ *Id.*

³¹¹ *Id.*

³¹² *Id.*

³¹³ Mench & Swanson, *supra* n. 308, at 3–5.

³¹⁴ *Id.* at 3.

events, science is used to argue for at least marginal changes in treatment of animals. Consider as well that Mench and Swanson acknowledge that science alone cannot answer animal-welfare issues; they, like other scientists we have seen, conclude that there must be a focus on morality as well.³¹⁵

Mench and Swanson go on to add one more consideration in analyzing animal welfare: it is also necessary to look at “the level of ‘risk’ to the animal’s welfare that is publicly acceptable.”³¹⁶ So, a three-prong approach considering science, morality, and public opinion is one methodology for analyzing animal-welfare issues that has been presented to industry.

Yet again, however, it is not only the EU, animal activists, and members of the scientific community—from academia to industry—that are focused on the science of animal welfare. There are also conceptual and theoretical discussions on reconciling how scientists view animal welfare and how animal issues are viewed by philosophers. It is argued by David Fraser, for example, that *some* modern ethicists’ views may be subject to accommodation by what scientists are doing in their animal-welfare studies, and that scientists and ethicists may be able to bridge some of the gaps in their approaches to animal-treatment issues.³¹⁷ Fraser recognizes that ethicists argue that there should be broad changes in the way that animals are used while animal-welfare scientists on the other hand “have typically tried to assess relatively minor changes in animal use practices, asking, for example, whether sows are better off in pens or in stalls.”³¹⁸ But according to Fraser, the broader changes suggested by philosophers should be technically and scientifically analyzed just as are the minor changes suggested by scientists.³¹⁹

Fraser identifies several trends in animal-welfare science that may help bridge the gap between scientists and certain philosophers.³²⁰ The first trend is the recognition by scientists that animal welfare involves values.³²¹ The second is the recognition by scientists that emotions and subjective experiences of animals are areas of legiti-

³¹⁵ *Id.* at 5; e.g. Johnson, *supra* n. 290, at 2178 (noting that ethical considerations are “inextricably interwoven in the fundamental question of how we ought to care for and treat farmed animals”); see generally David Fraser, *Animal Ethics and Animal Welfare Science: Bridging the Two Cultures*, 65 *Applied Animal Behavior Sci.* 171 (1999) (available at http://www.fao.org/fileadmin/user_upload/animalwelfare/P8.pdf (accessed Apr. 14, 2013)) (exploring developments in the historically distinct fields of animal ethics and animal-welfare science, and arguing that the convergence of these disciplines may lead to a more integrated field of study).

³¹⁶ Mench & Swanson, *supra* n. 308, at 5–6.

³¹⁷ Fraser, *supra* n. 315, at 178–86. Note that Fraser divides philosophers dealing with animal issues into two groups and seems to believe reconciliation is only possible with one of these groups—those that do not demand that rights be given to animals.

³¹⁸ *Id.* at 180.

³¹⁹ *Id.*

³²⁰ *Id.* at 182–86.

³²¹ *Id.* at 182.

mate scientific study.³²² The hope here is that, with further dialogue and understanding between the two disciplines, perhaps the scientific and the philosophical can be further integrated in the future.³²³

While Fraser sees advantages from melding the views of scientists and philosophers, is the recent translation of science into animal-welfare regulations really a favorable development for animals used in agriculture, experimentation, and entertainment? The answer to this question depends on at least two things: first, what “science” are we looking at; and, second, how is this “science” actually being used? With respect to what science is being used, as Fraser points out, the training of animal-welfare scientists and the recommendations they make tend to revolve around small changes in the treatment of animals and the welfare implications of these kinds of changes.³²⁴ Fundamental issues of whether, given modern science, it is appropriate to use animals in agriculture, experimentation, and entertainment at all are not considered. Science is used simply as gauze, resulting in changes in animal treatment that stem, only slightly, the flow from the wound of continued human uses of animals in agriculture, experimentation, and entertainment.

And this is more alchemy than science; it pursues a chimerical concept of “animal welfare” mired in the assumption that present uses of animals must continue. It is no more than an attempt to create gold with mortar, pestle, and whatever else you choose to throw in. There is no real gold ore of “animal welfare” to be mined from slight changes in animal treatment based on this “science.” What this new scientific-animal-welfare milieu fails to do is analyze the real implications of recent science, which show how truly similar many animals are to humans with respect to their cognitive skills and emotional lives. It is this science that could be of utility in answering the ultimate question of whether present uses of animals can in any way be morally justified. But this is not the science used in this era of scientific animal welfare.

Are we applying the science we have in such a manner that its implications are truly carried out in regulations? Obviously, if you use only some of the science available and that science is narrowly focused as is described above, the answer is going to be “no.” Broader modern animal science shows that many animals have cognitive abilities far beyond what would have been imagined only a few years ago, as well as a full suite of emotions, including despair, fear, and anxiety. Furthermore, at least some animals possess sophisticated positive emotions such as compassion and empathy.³²⁵ As a result, we know that

³²² *Id.* at 183.

³²³ Fraser, *supra* n. 315, at 186.

³²⁴ *Id.* at 180, 186.

³²⁵ See e.g. Jules B. Panksepp & Gareth P. Lahvis, *Rodent Empathy and Affective Neuroscience*, 35 *Neuroscience & Biobehavioral Rev.* 1864 (Oct. 2011) (available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3183383/> (accessed Apr. 14, 2013)) (examining empathy in mice); Lisa A. Parr, *Cognitive and Physiological Markers of Emotional Awareness in Chimpanzees* (*Pan troglodytes*), 4 *Animal Cognition* 223 (May 2001)

animals feel many of the things humans do and can be injured in many of the same ways as humans. Even some of the science that is actually used in making modern animal policy seems to accept these as premises. Nonetheless, the logical conclusion of modern scientific findings should be that any act one would not do to a human should likely not be done to an animal, since the animal is likely to be injured in much the same way a human would be harmed by the act. If these were the implications of science that were being seriously considered, then I believe science would be properly and honestly used. If this were what was being done with science, however, it would likely send a formidable tremble through both industry and the populace, since it would signal the end of a whole group of industries and a monumental change in human behavior. Modern science points to abolition of the uses of animals in agriculture, experimentation, and entertainment as the moral choice.

But it is not these fundamental issues that are being considered in present animal-welfare science and its application in the modern period. Despite the fact that animals can be injured in the same way as humans, there is an assumption in animal-welfare science that the use of animals by humans in agriculture, experimentation, and entertainment is appropriate. The underlying moral issue of whether these uses of animals should be abolished is not raised or considered in this science, even though modern scientific research generally implies that the moral justifications for these uses are unfounded. So what we see in modern animal-welfare science and the recommendations coming from that science is a focus on technical and engineering questions: how much space is necessary for animals to have some minimal level of welfare, how should feeders be placed, how should water be made available, how much light should be provided, what should sound levels be, and so on. In the modern period, we have entered an era in which science is purportedly used both to define how animals should be treated and to form the foundation and motivation for regulations relating to the treatment of animals. The true implications of science—that would likely lead honest policy makers to an abolitionist conclusion—are not pursued.

IV. CONCLUSION

From the beginning of human history to the present, there has been an observable progression of motivations for the legal regulation of animals. We began with simple economic rules to deal with losses of and damage caused by animals, and we continue to have regulations based in one way or another on economics today. Religious motivations have also been of great import at numerous points in the history of animal law. More recently, we have seen animal laws that were meant

(available at http://userwww.service.emory.edu/~lparr/docs/about%20me/11_AnimalCognition_2001.pdf (accessed Apr. 14, 2013)) (examining the emotional responses of chimpanzees to stimuli).

to change human behavior—rules that were intended as tools of social engineering. Closely following the period of social-engineering regulation was the movement towards regulating the use of animals for the purpose of protecting animals themselves, i.e., animal-protection motives. Initially, these laws were based on relatively subjective notions of being “humane” and avoiding “cruelty.” In our modern discourse on animal law, however, there is the new mantra of regulating based on scientific animal welfare.

While in the abstract this application of science to animal law might seem to be a good thing for generating real progress in the law for the benefit of animals, this is not necessarily the case. Unfortunately, in our present utilization of science, we are not considering the foundational moral and ethical issues actually raised by modern scientific research on animals. Instead, we are focused on technological and engineering goals, and aim to make only marginal changes through definitions of welfare that assume the propriety of using animals in agriculture, experimentation, and entertainment. This assumption is one mired in the hierarchical thought that has dominated the human–animal relationship for millennia, even though modern science has burst this view asunder. The application of scientific animal welfare in modern animal law reflects that science is indeed just another human endeavor colored by culture, politics, and money.³²⁶ It drifts along with the tides of all human thought; science cannot be divorced from society.

In addition to the gaping hole created by the failure of present animal-welfare science to address foundational questions about the use of animals by humans, this kind of “science” can—and apparently is—being used as empirical cover to justify present industry practices or make only minor recommendations for change around the edges of animal exploitation. This can lead to complacency in members of the public and public officials, who may wrongly assume that animal treatment is being regulated in line with our best science and that there are no further issues of the treatment of animals that need to be considered.

Thus far, the promise of science has been broken as it relates to animal law in the emerging era of scientific animal welfare. This promise will only be fulfilled when the science relating to animals, and its true implications for morality and the law, merge into a single stream. And what can be done to effect this merger? Two avenues of action come to mind: education and litigation. Animal activists should concentrate as much of their resources as possible on educating both the public and important targeted constituencies, such as legislators, law-

³²⁶ See generally Thomas S. Kuhn, *The Structure of Scientific Revolutions* 24–26 (Otto Neurath ed., 2d ed., U. Chi. Press 1970) (stating, for example, that “normal-scientific research is directed to the articulation of those phenomena and theories that the paradigm already supplies,” and “the invention, construction, and deployment of that apparatus [scientific research] have demanded first-rate talent, much time, and considerable financial backing”).

yers, media figures, and celebrities who can effect change and public opinion on this new science. By "litigation," I mean that in judicial actions taken for the benefit of animal causes, attorneys and litigants should utilize and rely on modern science revealing the great similarities between humans and other animals whenever possible. Cases to pursue and causes to champion should be chosen on the basis of the important animal science that can be utilized in these proceedings. In a sense, this "litigation" aspect is really just one arm of "education"; it is the education of judges, lawyers, and their clients. Whether this new science will ever properly be unified with animal law must necessarily be left to the passage of time. But for now, animal-welfare science as the foundation for regulation of human exploitation of animals leaves us far from where modern science actually leads, and appears simply to justify the present relationship between humans and animals.